

1935

# CABLE

COOPER UNION







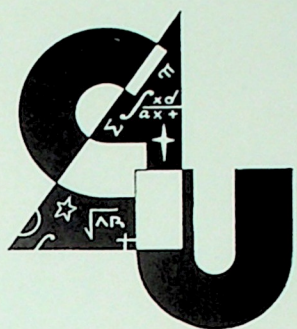
THE  
FOURTEENTH  
VOLUME  
OF

THE  
CABLE



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Editor-in-Chief





The  
**CABLE**  
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YEAR BOOK  
of the  
COOPER UNION  
published by the  
JUNIOR CLASSES  
of the schools for  
the advancement of  
SCIENCE AND ART



## OUR THEME

Mathematics has been placed in the category of concrete sciences. Saturated with technicalities, it is distasteful to the uninitiated. Yet Scientist, Philosopher, Musician, Artist and Poet alike, all find a mutual starting point in this fundamental subject.

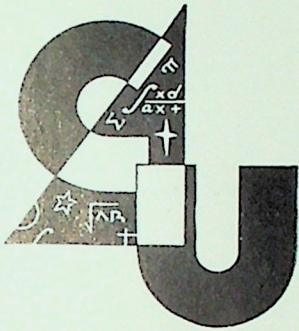
Mendelian laws determine our physical features. There is poetry in all forms of mathematics and mathematics in the construction of poetry; the Artist composes his paintings and geometric symmetries are employed here to great advantage. Most useful, too, are the beauties of mathematical symbols and figures in this work. The pleasing sounds we call music issue from instruments ruled by algebraic principles. The philosopher, contemplating the universe and its mysteries, cannot deny that any of our conceptions of the realms of eternity are paralleled by the mathematician's infinity.

Is it not fitting, therefore, that we as students striving to further our knowledge in these fields, wind our theme around this crossroad of all endeavor—  
MATHEMATICS?



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OF

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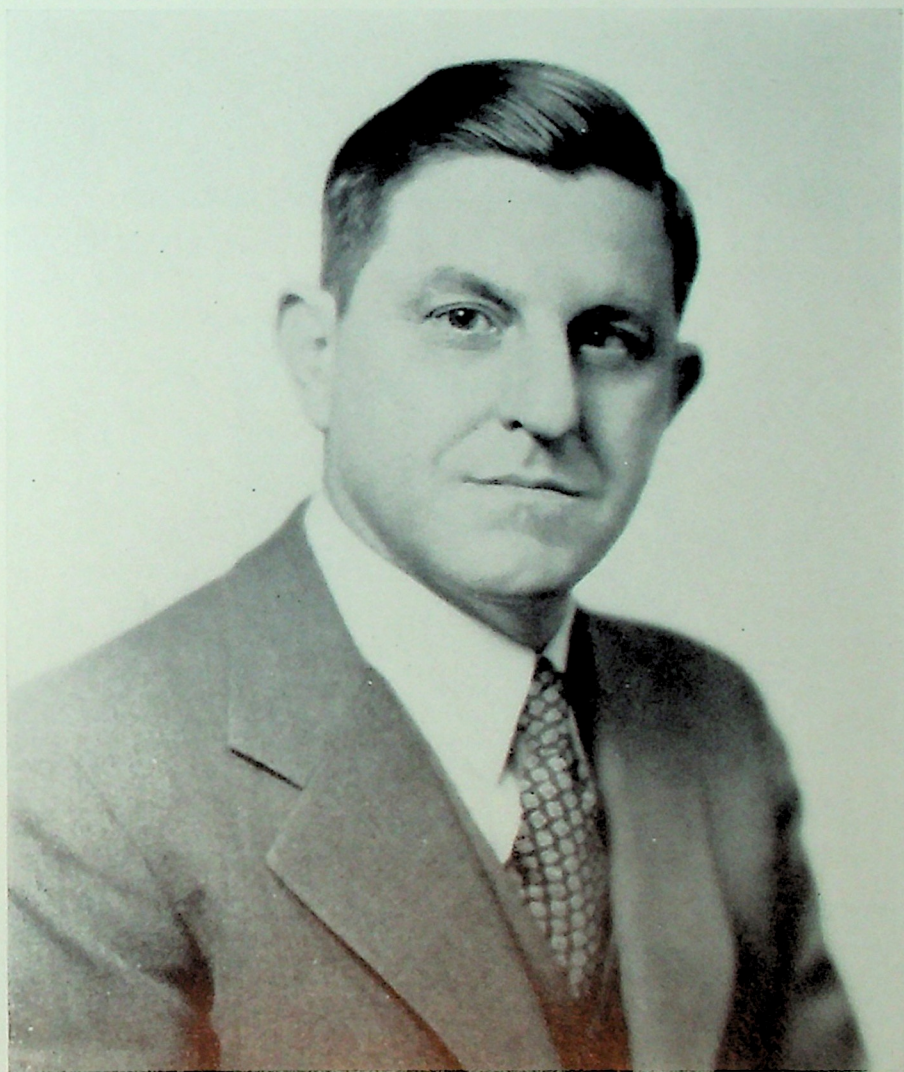


TO PROFESSOR REDDICK

In appreciation and deference to a friend and guide, we respectfully dedicate this volume whose theme is so closely linked with his life's work.







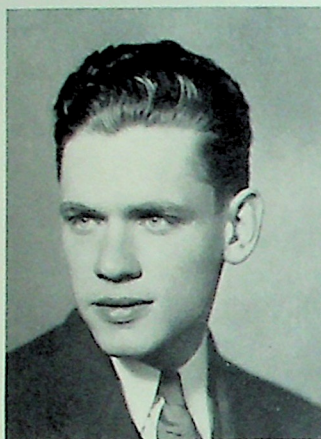
PROFESSOR H. W. REDDICK



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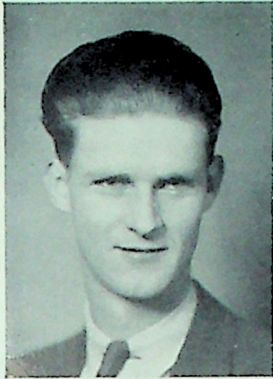
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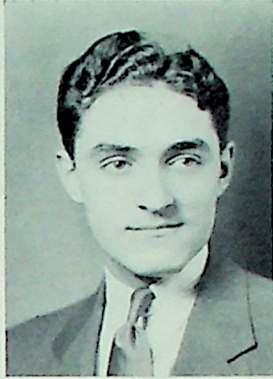
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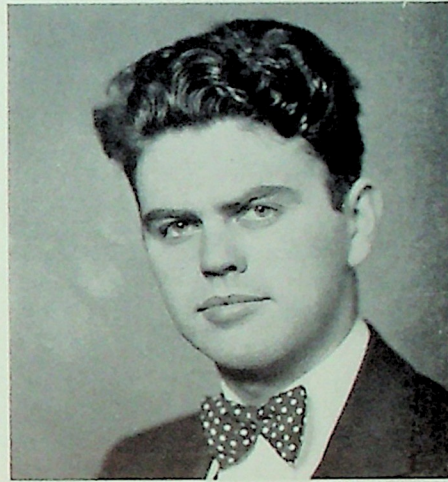
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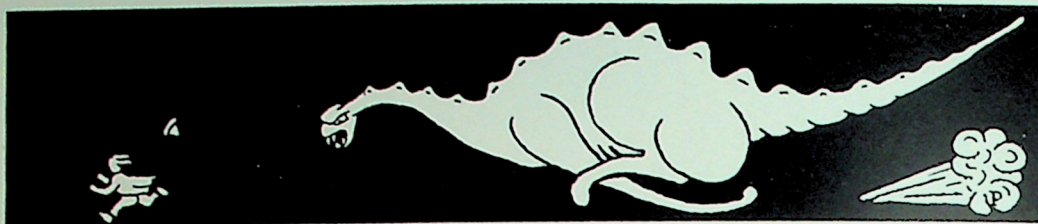


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## FINDING OUT

**M**AN is just one jump ahead of the animals. The reasons he has been able to keep one jump ahead have been variously referred to as Thought, Power of Reason, Providence, *et cetera*. It has also been claimed at times that the credit is due to whole wheat bread, auto-suggestion, or the Hearst newspapers. But the real truth is that only man can predict the future. The handsomer animals can jump higher, scratch harder, and make funnier noises—they can even tell lies, but they cannot tell in advance how long before the apples will be ripe, or which way the cat will jump. No ape ever was smart enough to buy a slice of next year's banana crop.

Not only can men foretell the future, but they can do it two ways. They can do it right, or they can do it wrong.

Predicting the future wrong may be worth learning to do, and we do not say it isn't. But we would hesitate to recommend it as a life work for a young man just starting out. The profession is overcrowded, filled already with great names, and the chances are that against such competition the young man would have to wait for someone up ahead to die before he got his chance.

On the other hand, by predicting correctly, even a beginner can attract more attention than a bandaged nose. When he really gets into his stride, people will gawk at him in the streets, and even the snobs among our leading citizens will unbend to tell him enthusiastically that he is crazy. With this vision before us, therefore, let us discuss the ways in which this sort of prediction can be accomplished.

First of all, we can predict some things very accurately. We can set a date for the next eclipse of the sun and we can tell how hard the rake-handle is going to hit you when you step on the rake. These things are subject to "Natural Laws," by which we mean that they work the same way every time.

But unfortunately most of the things we are curious about do not always work the same way. "Natural Law" will do very well for mechanics, physics, and chemistry, but in sociology and psychology, economics and business, no rule seems to work every time. But we don't have to be right every time to make money. For example in business, no one ever is. Business men are successful if they guess right more often than they guess wrong. They may kick like a steer about "rubber dollars," but the fact is that all business works under rubber rules anyway.

Whenever we dig for reasons for anything and strike rubber rules, we are forced to stop predicting that anything will be certain to happen, and predict instead what will **probably** happen. We measure the degree of probability mathematically, to find out just how much rubber there is in the rules. Measuring or computing probability has kept any number of monkey-minded mathematicians happy for years. Many books have been written about it, and a





### WHITE HORSES EAT MORE THAN BLACK HORSES

whole science, statistics, has been based on it. But that's all it is—analysis for rubber in the way things work.

Now let's look at a few homely examples of how the rubber rules work.

The gentlemen who discuss "Choice and Chance" in books on elementary algebra, traditionally demonstrate with red and white balls in a bag, or tossed coins, or dice. No doubt this is because coins and dice will stand still to be counted, and red and white balls are easier to pull out of a bag than horses. Further, these classic examples are simpler; a coin, for example, can fall only heads-up or tails-up, and most of us are able to tell which is which.

But the rules laid down for dice or coins apply just as well wherever "pure chance" is involved. White horses will generally eat more than black horses, when the black ones are fewer. If the cook makes his hasenpfeffer "strictly fifty-fifty—one rabbit to one horse," most of what the customer gets on his plate will be horsemeat. If you toss an egg out of your hotel window in Naples, the chances are that whoever it hits will be Italian.

We can make statements of this sort safely, because we know all the relevant factors in each case—we have "inside information." We are predicting the future on the basis of the complete knowledge we have in advance.

Now as a matter of fact we **can** occasionally toss a coin ten times and have it show heads-up ten times in a row. People **have** fallen six stories and survived. Someone **might** breed a purple cow (white crows have been known to occur). And for all we know Vermont **could** fail to vote Republican. We know that these things can happen, but we never expect them to happen. Other things, such as being hungry along about noon, we are justified in expecting, but they may not always happen.

The tendency of more-horses to eat more than less-horses is natural, or inherent in the circumstances, and tendencies like these may be measured mathematically as Inherent Probability.



### ALL BLUE-EYED WHITE TOMCATS ARE DEAF

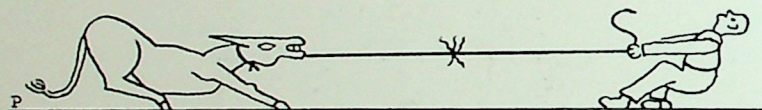
Show us a white tomcat with blue eyes. We'll lay you bets he's deaf. How do we know? Darwin said so. How did he know? He found out. He found out a great many things as well, all by the same method.

Darwin's problem was the same one that confronts every man who tries to figure out what's coming next. With dice or roulette wheels we can observe



and allow for the natural, "Inherent Probabilities." The factors controlling the behavior of tossed coins can be understood. But in business and medicine and psychology we have no inside information to go by. There are too many causes at work all the time, too hopelessly entangled with one another, and constantly fluctuating in degree of influence. Worse, the real causes are next-to-impossible to identify, and any number of things that look like causes are not. If the inside information had been available, Darwin could have sat in his armchair and predicted a good deal by simple logical deduction—"reasoning down." The ready-made knowledge was not to be had. But he could and did "reason upward." He used the method of scientific induction, working backwards from effect to cause. He classified all the animals and plants he could find, noting in what respects they were alike, and in what respects they were different. In the case of cats, those he found to have whiteness and masculinity and blue-eyedness in common, all happened to be deaf.

This connection, or **association**, between qualities, need not be 100% true to be useful. If 80%, for example, of all Nordic tomcats studied were deaf, we could assume a **statistical association** with a "coefficient of association" of 80%, and predictions based on that should work out in the long run, just as predictions on roulette wheels do. Instead of predicting that all new cases would be deaf, we should merely predict that in the long run 80% of all new cases should be deaf. The case, however, is that all such cats **are** deaf.



THE ROPE AND TWO MULES

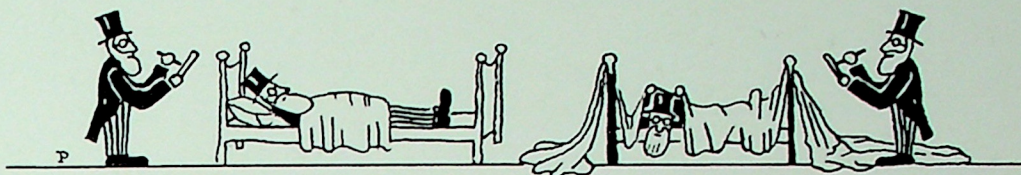
Here we have Herman leading his mule. Herman is not progressing very fast, but he will speed up like everything when the rope breaks. There is a scientific relationship between Herman's speed and the condition of the rope. This is known as **contingency**.

A contingent relationship can act like the trigger of a gun, which functions just once to effect a long series of results, or it can act the other way round, like the last straw of a long series of straws breaking the camel's back just once.

It can also work both ways. A "stop-loss" order on a block of stock-market securities will have no effect on the price of the stock until a definite price-level is reached. Those shares are not for sale until the order price is reached. Then suddenly they are thrown automatically on the market. Contingency number two is the effect on prices when the stock is put on sale. Notice that each time market prices vary up or down numerically like a thermometer, but the appearance on the market of the block of stock happens all at once kerplunk. The first case, the dumping of the stocks, is a result of the last-straw price and the second case the price fluctuations, follows as a cause or trigger action.

We usually don't compute a "coefficient of contingency" as often as we simply recognize a "point of contingency," but the usual mathematics of probability applies when we do. There is also the added possibility of there being as great an error in the computation of the "coefficient of contingency" as in the original prediction. In this case the process would continue ad infinitum and it would be just as correct to just recognize a "point of contingency".

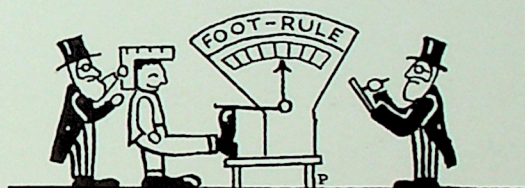




THE LONGER THE BED, THE SHORTER THE SHEET

Statistical investigation of the truth of the proverb would involve measuring all the beds we were allowed to get to, measuring also the sheets on each. When we had determined how closely short sheets corresponded with long beds, we could describe the relationship as a correlation having so-and-so per cent. for a "coefficient of correlation."

Correlation technique is being applied to a great number of subjects as fast as methods of measuring the things to be studied are devised. Beauty, intelligence, sales resistance, and even more dubious qualities are being rated on a scale of 100. These are being compared to wealth, income, sales, immunity-to-mumps, and to each other, with at least some degree of success.



MEASURING ERRORS

So much for the statistical approach. Before you start predicting, however, read up "Probable Error" chapters in a few textbooks, and you'll find a whole new set of probability formulae. These are used to compute how dependable a prediction based on statistical information may be,—what the chances are, in short, of your neat conclusions being wrong. When you know that, you are already two jumps ahead of politicians and newspaper editors.

Then, of course, you just go ahead and predict. If you don't at first succeed, keep your eye on the Normal Curve and try another forty or fifty times.



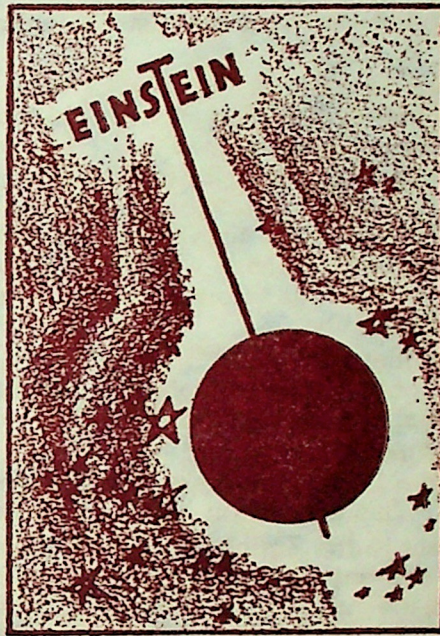
THE NORMAL CURVE



"Algebra is a lazy man's arithmetic. If you don't know a thing, call it  $X$ , and act as if you do know it."

A description of algebra by Einstein's uncle.





THE SCHOOL



# Albert Einstein



DARK-HAIRED brown-eyed, carefree lad of fifteen walked the streets of Milan taking great gulps of intoxicating Italian air; free at last of physical and mental discipline, no thoughts save those of music. New melodies flew into his mind, later to be tried at home on the violin.

This is the picture one must paint of the most brilliant mathematician today, Albert Einstein. This was how he felt after years of study in schools in Germany where he was born. German discipline, at that time, was present even in its institutions of learning. Depressed, the students had no desire to put their best foot forward. This explains the story told that Einstein failed in mathematics in elementary school while at the same time he could have entered the second year of college easily. While his friends were still in decimals, he was in calculus. Most of his advancement was through books given him by relatives and friends who recognized his ability.

It is interesting to note that as a child Einstein learned to talk slowly. His parents thought him abnormal. Later he had such difficulty making known his wants to his governess that she nicknamed him, "Father Bore."

In order to leave the German school and go to Italy where his parents had moved, he conspired with a Doctor to obtain a certificate that he was suffering from nervous exhaustion. This preyed on his conscience for years afterwards.

From Italy, Einstein went to the Zurich Polytechnical Institute in Switzerland but was unable to pass the entrance examination, in all subjects but mathematics and physics, until he had taken preparatory courses. It was here in the institute that he met and became engaged to Miss Milera Maricz, a student, who was interested in the same work. They were married in 1903.

His one desire was to become a teacher so that he might avoid the rivalries and chicaneries of business. Money and power were hateful things to him, and still are. His love of peace made him an ardent exponent of pacifism and he later served as a member of the League of Nations on the committee to outlaw war.

Teaching appointments were scarce when he left school and this Newton of the 20th century was forced to take a position as clerk in the Swiss patent office. While here his work on physics attracted the attention of great contemporaries. Einstein was only 23 years old when he gave to the world his astonishing Theory of Relativity. Oddly enough, this is the same age at which Sir Isaac Newton propounded his Gravitational Laws.

Soon he began to receive appointments to professorships. He came eventually to his native land to teach at Berlin, but left his wife and two sons in Switzerland for he was now separated from her. Shortly after he received his divorce, he married his childhood sweetheart, Elsie Einstein, a cousin of his. They are still enjoying connubial bliss.

Professor Albert Einstein is now at Princeton University, no doubt still finding his chief recreation in music. Although he never received instructions on the piano and very little on the violin, he plays both well enough for the concert stage. Mrs. Einstein says of him when he is playing, "He then forgets the world around him, indulges in reveries while extemporizing on the instrument, and abides in the Elysian fields."









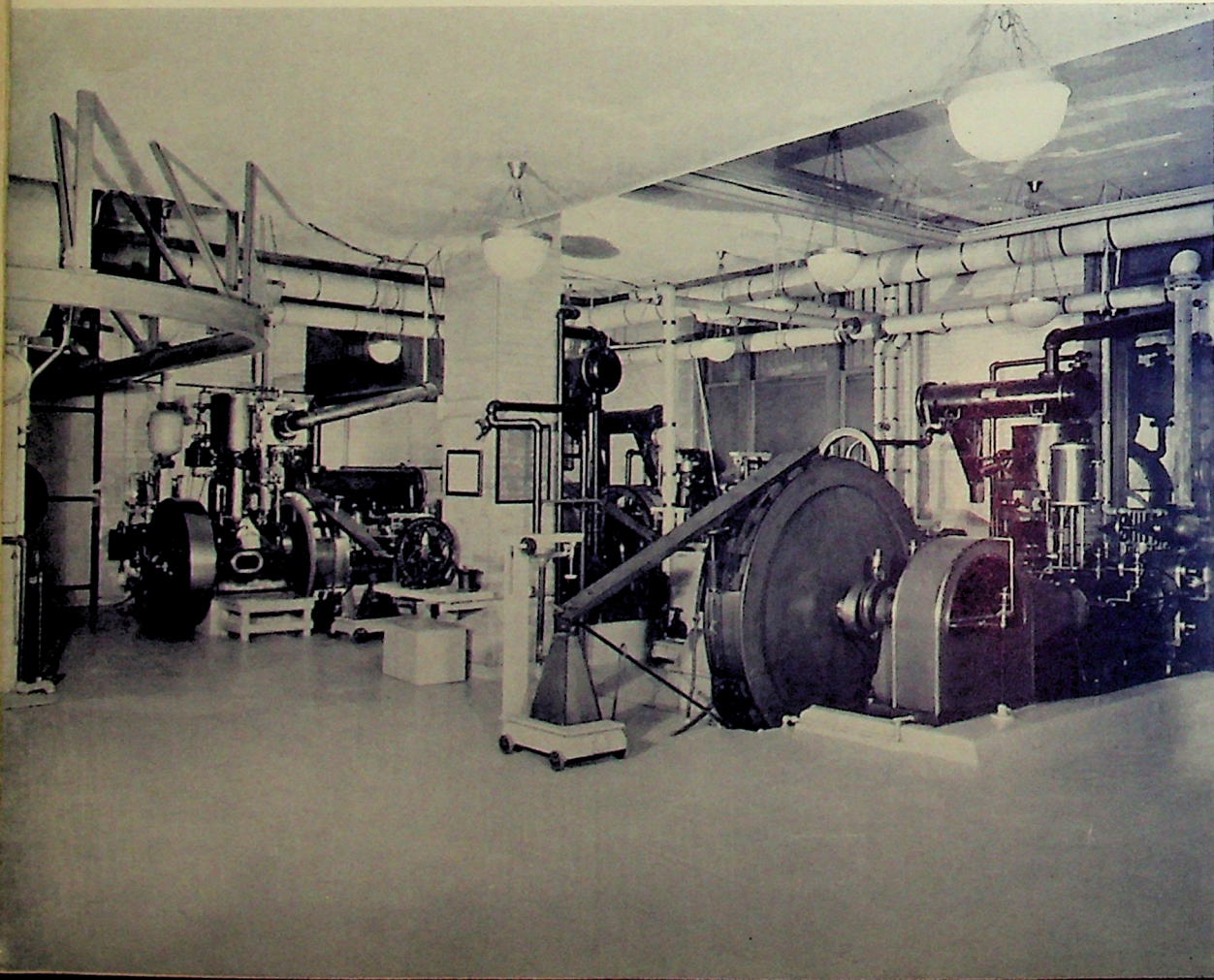




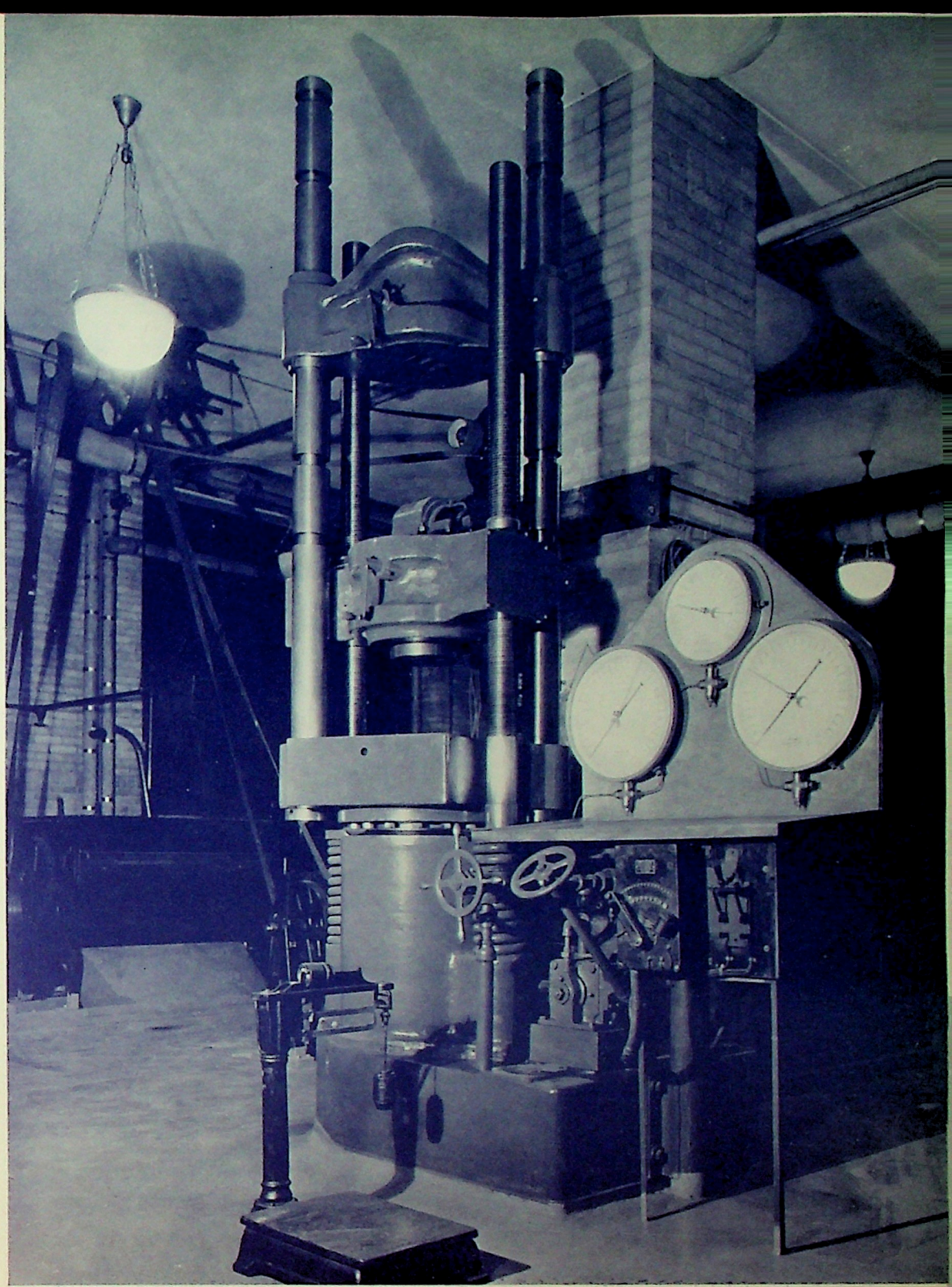
COOPER  
UNION



# MECHANICAL ENGINEERING

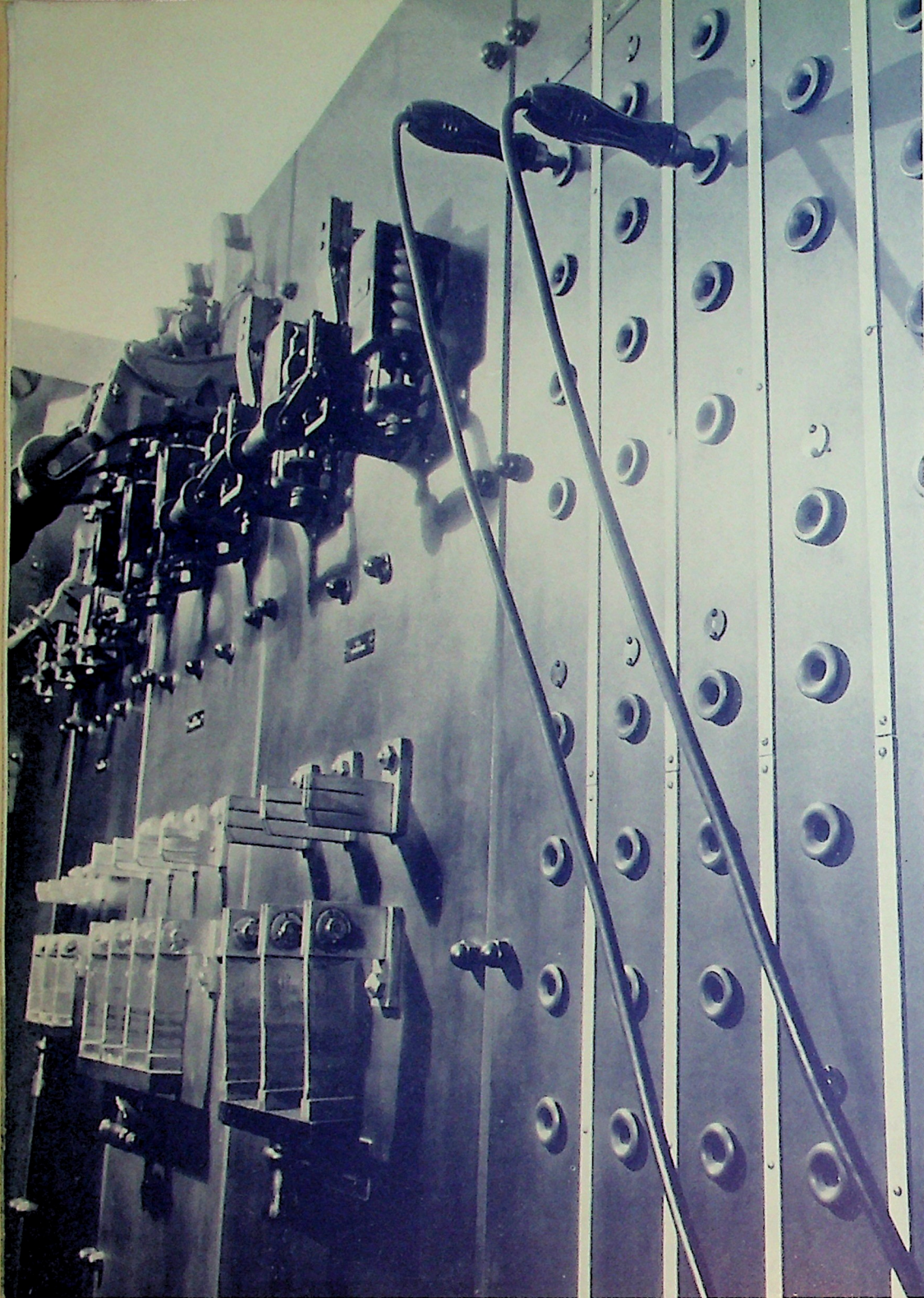






# CIVIL ENGINEERING

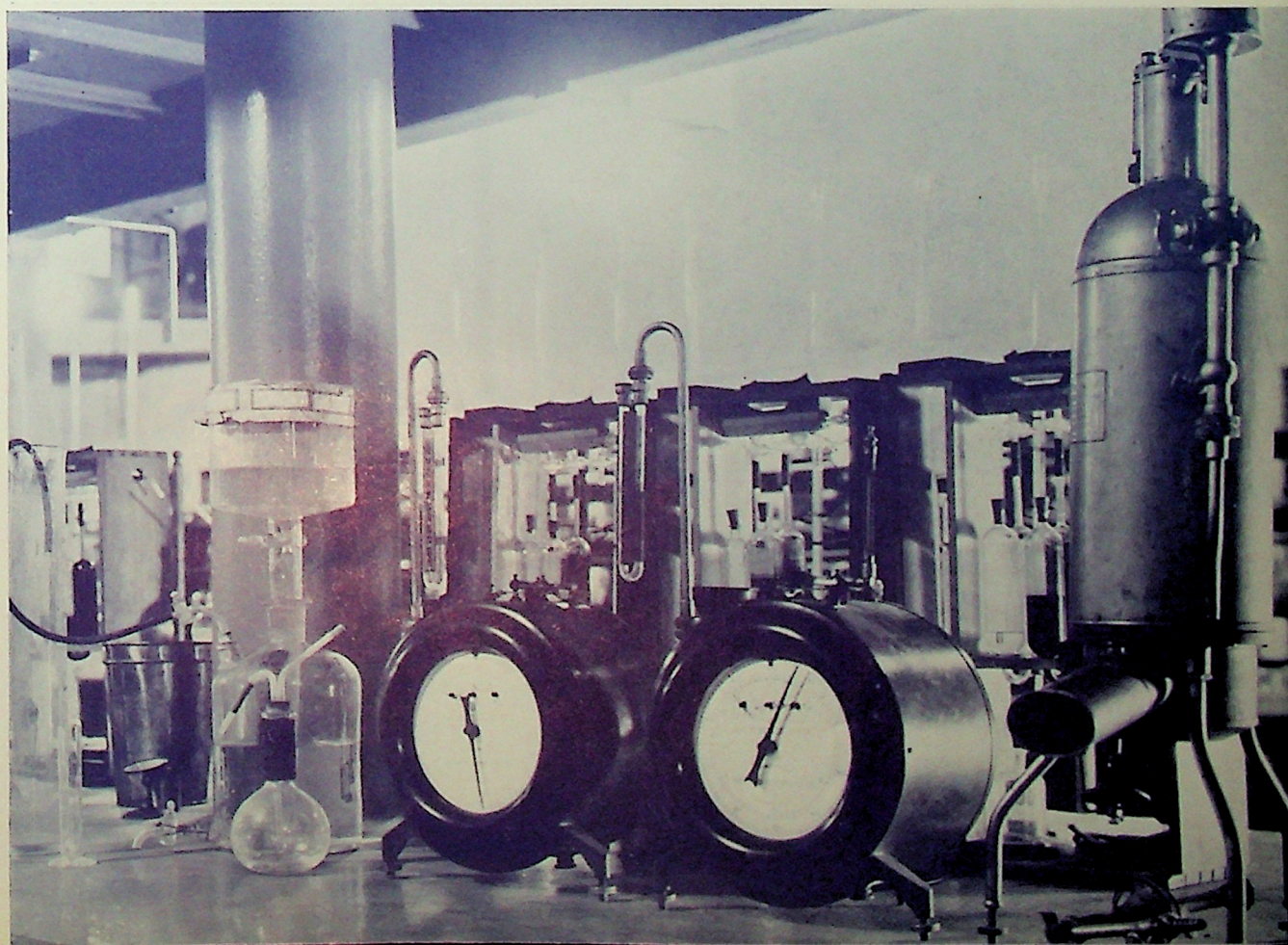




## ELECTRICAL ENGINEERING



# CHEMICAL ENGINEERING

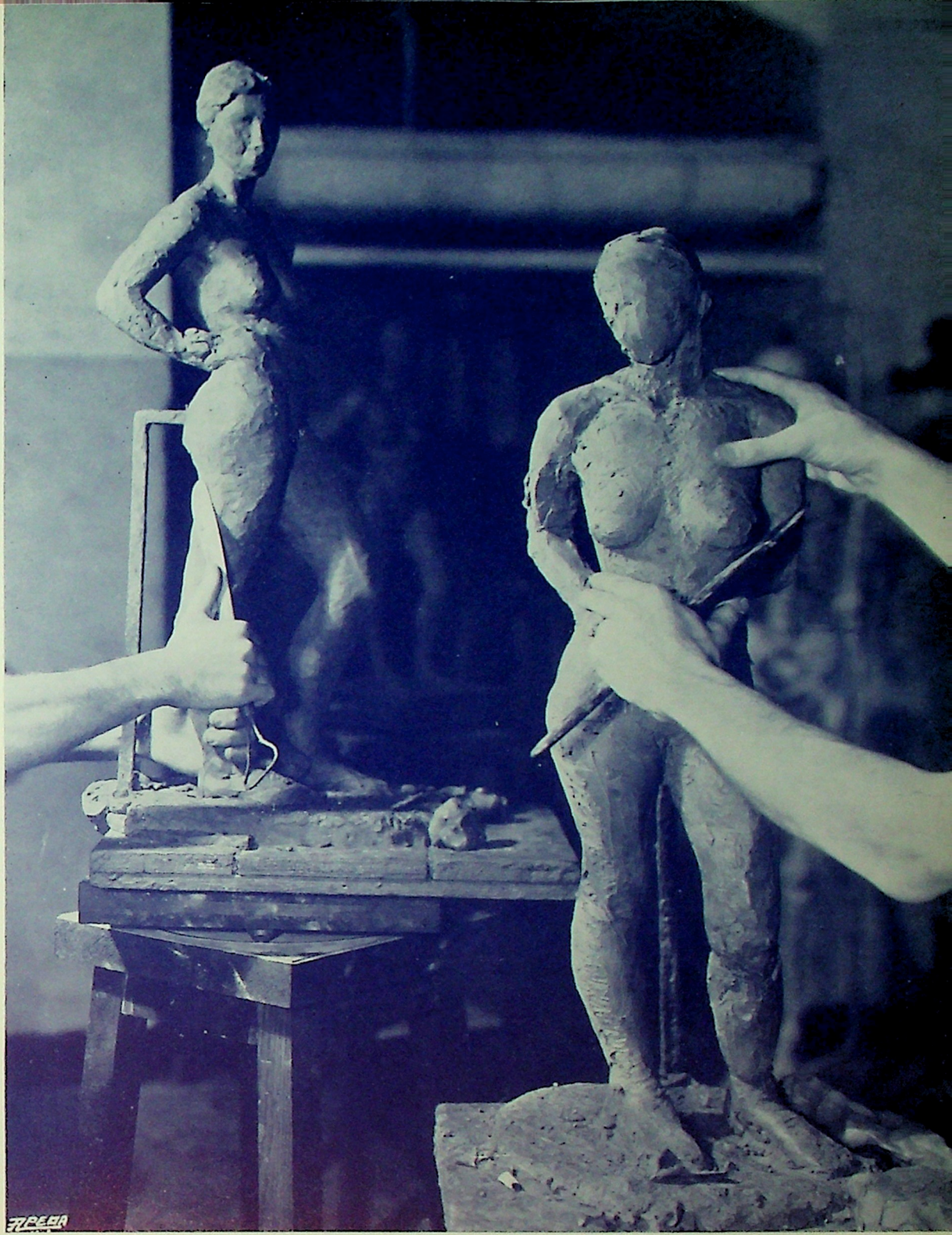




# ARCHITECTURE

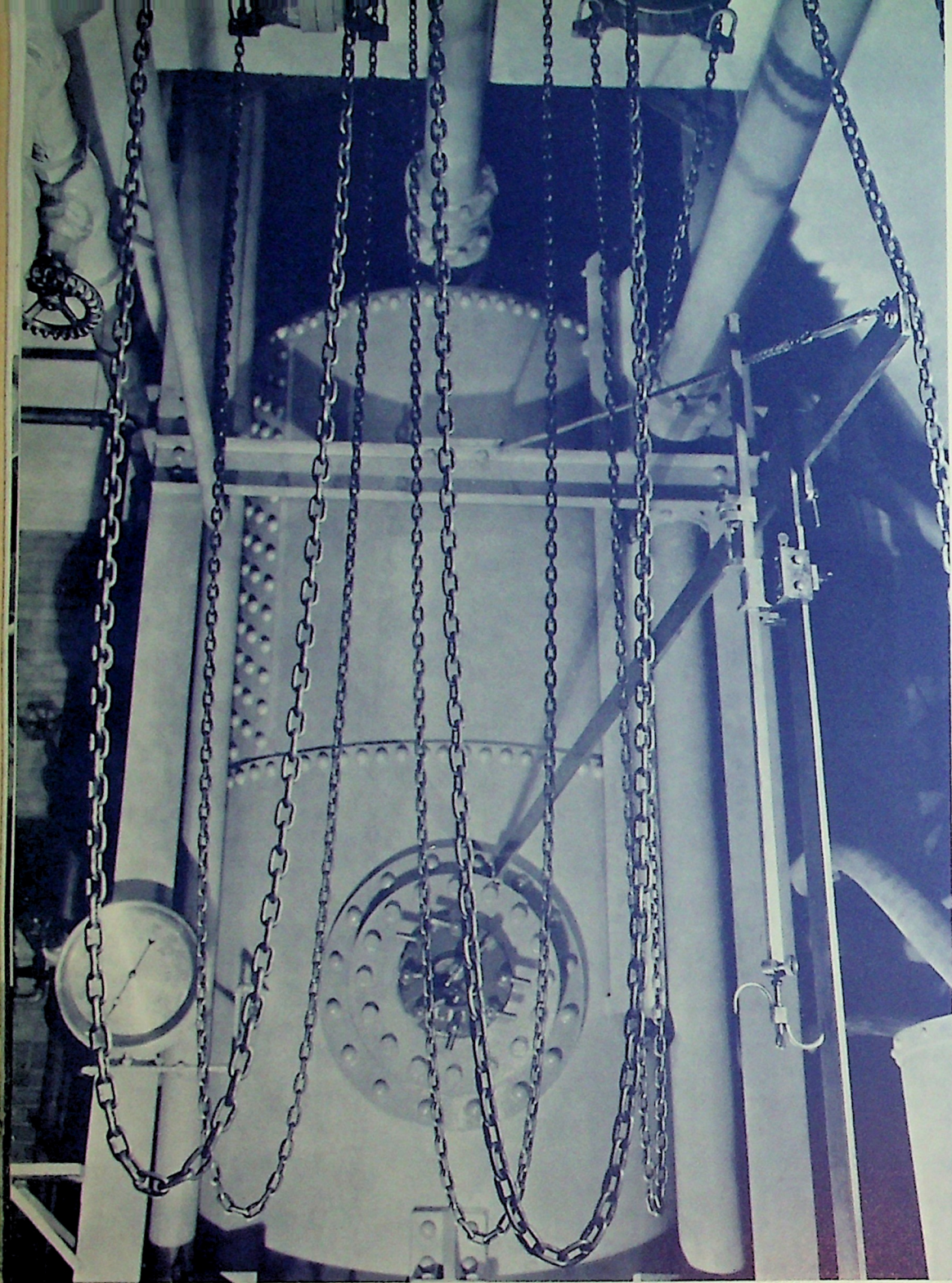






SCULPTURE





HYDRAULICS

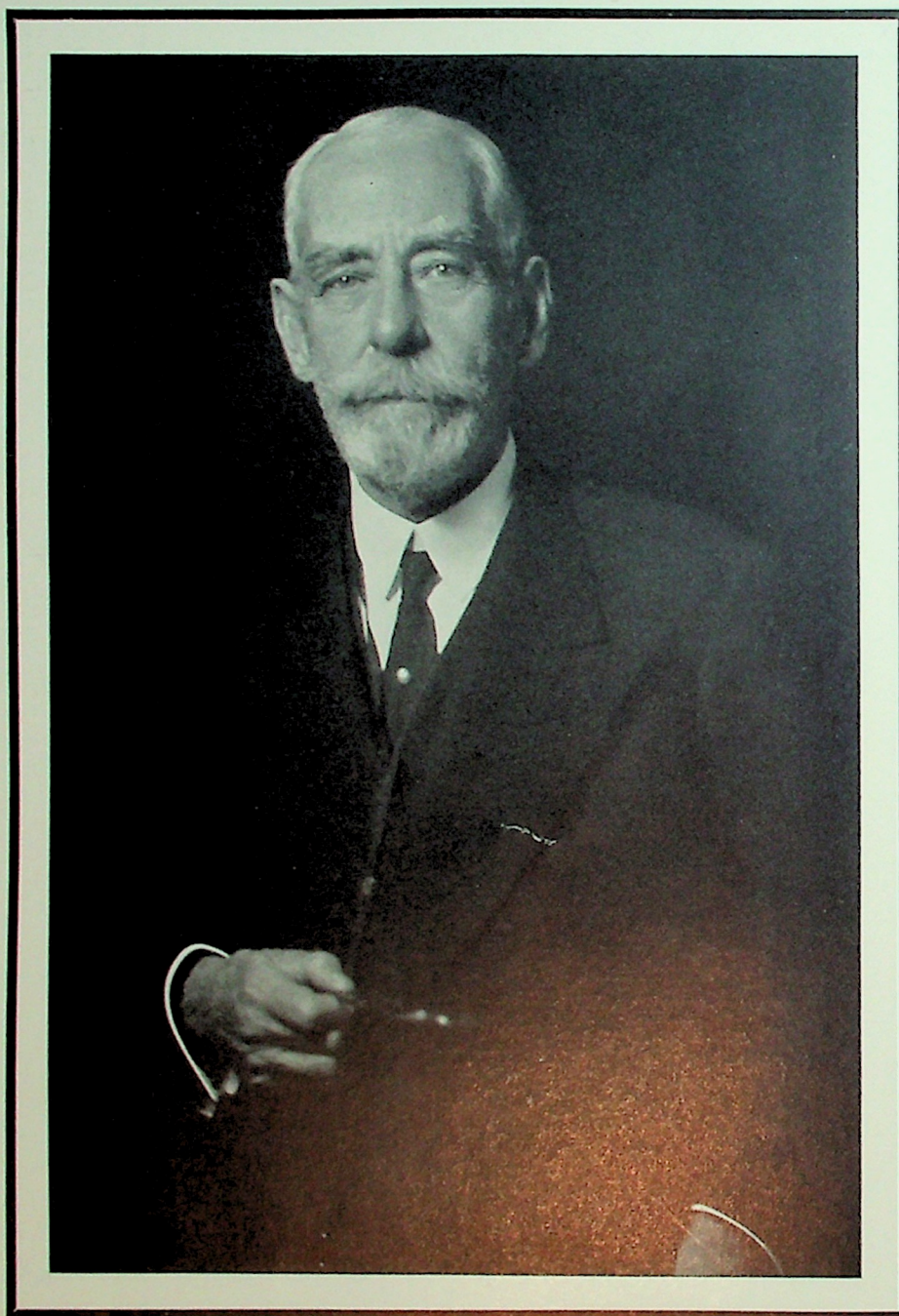


"What science can there be more noble, more excellent, more useful for men, more admirably high and demonstrative, than this of the mathematics?"

BENJAMIN FRANKLIN



*In Memoriam*



ROBERT FULTON CUTTING

President of Cooper Union from February 11, 1915  
Until His Death, September 21, 1934.



THE  
ADMINISTRATION

COOPER  
UNION



## A MESSAGE

### THE PRESIDENT OF COOPER UNION

"Peter Cooper gave all of his available fortune and the principal effort of his life to found an institution where without price of any kind, struggling young men and women could gain an education at night and at other times that would afford a means of livelihood and would also afford appreciation of the fine arts and recreation in the enjoyment of knowledge. The students and the graduates of Cooper Union represent an unusual class for they have had to fight against adverse economic circumstances for the education they have secured.

"In consequence of this struggle they are characterized by a strong individualism which is one of the contributing causes to the conspicuous success achieved by a large proportion of them.

"As one who has also struggled for his education, I feel a peculiar sympathy with the students and with the graduates of Cooper Union and shall do everything in my power to see that the purposes and noble aims of our founder are carried out."

GANO DUNN



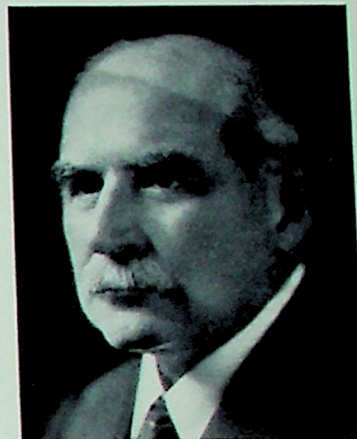
T H E \* C A B L E \* O F \* 1 9 3 5



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Trustee



GANO DUNN  
President



J. PIERPONT MORGAN  
Trustee



BARKLIE HENRY  
Trustee



ELIHU ROOT, Jr.  
Trustee



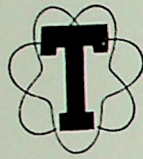
PERCY R. PYNE, Jr.  
Treasurer



EDWARD L. REHM  
Secretary



## A MESSAGE FROM THE DEAN



THE Cooper Union now has been in continuous operation for seventy-six years. During that time, New York has grown from a collection of large villages to the world's greatest metropolis; moreover, the whole tempo of life has been changed by developments such as the telephone, the automobile, and electric traction. By wide-spread applications of science to every branch of industry and to the construction projects of public works the entire circumstances of daily life have been changed and standards of living increased enormously.

And yet, throughout all this period, from what I have heard of the early days of the Institute, coupled with my own observations of the last thirty-two years, the Cooper Union student has not changed to any appreciable degree. True, his courses of study have been enlarged from time to time and realigned with the requirements of industry, but he still remains the able, conscientious, serious-minded, and appreciative young man who makes his mark in the professional world by virtue of sound training and superior character. In confirmation of this latter fact it is interesting to note that in the Night School of Engineering, during the worst days of the depression, student unemployment never rose above twenty-eight percent. In the possession of such a student body the Union is fortunate and indeed happy.

Teaching is a mutual operation, and we are similarly fortunate in the possession of an able and devoted staff. Truly the ideals of our revered Founder have been manifested through several generations of our instructing staff in their personal interest and service to the student. To provide the very best instruction is no small task and few students realize the work of the Faculty which goes on "backstage" in individual work, conferences, and committees in order to provide smoothness of operation throughout the academic year and to maintain the degree of effectiveness of the courses which Cooper standards demand.

With such a staff and student body, characterized by an increasing degree of happy comradeship between them, we come close to possessing the ideal college of which I have spoken so frequently in the past. As a thought which may become helpful in the complete attainment of this ideal, let me quote from that wise and keen observer of human nature, Dr. Samuel Johnson, in the remark to his friend, Boswell: "Sir," said he, "to improve the golden moment of opportunity, and catch the good which is within reach, is the great art of Life."





DEAN GEORGE F. BATEMAN



## COMMITTEES OF THE FACULTY

### Committee on Admissions:

Professor REDDICK, Chairman

Professors BALL, ENDERS, BRIGHAM, DR. FINDLEY

### Committee on Instruction:

Professor BATEMAN, Chairman

Professors FOSS, BALL, REDDICK, ROSSMASSLER, NEWMAN, TOWLE

### Committee on Promotions:

Professor BATEMAN, Chairman

Professors FOSS, BALL, REDDICK, ROSSMASSLER, NEWMAN, TOWLE

### Committee on Student Standing:

Professor BALL, Chairman

Professors TOWLE, PICKETT, MERRITT, DR. FINDLEY

### Committee on Extra-Curricular Activities:

Professor BRUMFIELD, Chairman; Mr. ROEMMELE, Mr. STARR

### Committee on Scholarships:

Professor TOWLE, Chairman; Professors PICKETT, HAUPTMAN, Mr. HOPE

### Committee on Schedules:

Professor PICKETT, Chairman

Professors ROSSMASSLER, TOWLE, MILLER, Mr. ROEMMELE



THE FACULTY  
AND STAFF

SCHOOLS OF  
ENGINEERING





GEORGE F. BATEMAN  
Professor

## MECHANICAL ENGINEERING DEPARTMENT

GEORGE F. BATEMAN, Professor

If stripes were issued at Cooper for valuable services rendered, our Dean's arm would be covered from shoulder to cuff. Upon his graduation from the Day school in 1907, he was appointed to the teaching staff of both Day and Night schools, and has continuously striven to improve not only the academic conditions but, also the extra-curricular activities. His connection with the school was severed for a brief period when he offered his talents to the U. S. Navy Gas Engine School at Columbia University during the World War. He was later enrolled as a Lieutenant and detailed to the training of engineer officers. The greater part of the innovations in Cooper have resulted from the efforts of Dean Bateman. To him we owe the enlargement of various laboratories and the recognition of the new courses by the New York State Department of Education. Cooper has shown its appreciation of his work by continuous promotions from the rank of instructor to his present post. Dean Bateman has always been actively connected with alumni affairs and is a charter member of the Alumni Federation. To fulfill the duties of Dean as he believes they should be fulfilled he has instituted a personal interview service for students who wish to have their problems clarified. By his willing cooperation and eager help, he has made a personal friend of each student that he has come into contact with. He has created a greater fraternal feeling between the students and the faculty, and there is no doubt that his efforts will be rewarded by making Cooper Union an even more outstanding college.

HERBERT F. ROEMMELE

Mr. Roemmele received his B.S. in M.E. from the Cooper Union Institute of Technology in 1925. He was an energetic student, in the same manner that he is now a dynamic teacher, and took an active part in the school affairs. He organized and directed the School Orchestra, was chairman of the Junior Prom Committee, President of his Senior Class and held office for many years in the Students Council, and Student Branch of the A.S.M.E. He has been the Honorary Chairman of the latter society since 1932. We all know of his forceful manner of speech, positive personality and ability to handle the subjects he knows so well, and can therefore appreciate the responsible positions he held after graduation. He went with the General Electric Co. at Schenectady, N. Y., after receiving his degree to take their Test Course. There he spent two years in the testing of large commercial steam turbines, alternators, generators, industrial control apparatus, and the newly developed electric refrigerator. Then for six months he was foreman of experimental turbine and steam nozzle tests. Being thus well founded in the field, he returned to Cooper in May, 1927 to become an instructor in the Mechanical Engineering Department. The Post Graduate M.E. Degree was bestowed on him in June, 1934. He is a member of Lambda Sigma Kappa, The Society for the Promotion of Engineering Education, The National Society of Professional Engineers and a Junior Member of the A.S.M.E. Mr. Roemmele's hobbies consist of music, fishing, hunting, swimming and, with an eye for a still greater knowledge of his chosen subject, mechanical tinkering.



### EMANUEL A. SALMA

Mr. Salma is another graduate of our school. If he entered Cooper Union with the intention of carving a niche for himself as one of the School's more illustrious students, he could not have better achieved his end. While at Cooper, he was a member of the Rifle and Baseball Teams; he participated in School activities by holding office in the Athletic Association; he was a member of the Chess Club; he held positions in his Junior and Senior Class Organization, the Student Council and the Tech Dance Committee; he was also a member of the Lambda Sigma Kappa and the Mu Alpha Omicron Fraternities. Upon graduation Mr. Salma entered the Planning Division of the United Electric Light and Power Company and spent fifteen months in high tension feeder extension work, feeder planning and layout work for the supply of the New York City Independent Subway System. We first had the privilege of seeing Mr. Salma as an instructor at Cooper Union in 1930 when he was appointed to this position in the Mechanical Engineering Department.

Added to his host of memberships are the Society for Promotion of Engineering Education, the American Association for the Advancement of Science and Junior Membership in the American Society of Mechanical Engineers. Mr. Salma's hobbies consist chiefly of fishing, photography and driving.

### WILLIAM A. VOPAT

Student days are indeed memorable days to Mr. Vopat. While attending Cooper Union in that capacity, he received the signal honor of winning the Schweinberg Scholarship for three consecutive years—1928-29-30. Not inactive in other fields, however, he earned for himself a position as Junior Prom Committeeman and served as Secretary and later Vice-Chairman of the Student Branch of the American Society of Mechanical Engineers of which he is now a Junior Member. Mr. Vopat received his B.S. in M.E. in 1931 and then became employed as Assistant Engineer with the Universal Refrigeration Company. But Cooper Union was to see more of this praise-worthy alumnus. Hardly a year had elapsed when he accepted an appointment as instructor in the Mechanical Engineering Department. He has since also taken post-graduate study at the University of Michigan and Columbia University. He is a member of the Society for the Promotion of Engineering Education and both the Lambda Sigma Kappa and the Mu Alpha Omicron Fraternities. As an antidote for the attendant strain of teaching, he resorts to hunting, skating, bicycling, photography and horseback riding.

### WERNER O. ENTENMANN

While working for the B.S. degree at Cooper Union Night School of Engineering, Mr. Entenmann served as an Ensign Engineer in the Naval Reserve Force studying from 1918 to 1919 at the U. S. Navy Steam Engineering School Preparation in Stevens Institute. In 1920 he graduated from Cooper and entered Post-Graduate study at Brooklyn Polytechnic Institute. His field experience is broad and varied. For a year after graduation he worked with the New York Steam Corporation as an Assistant Engineer. A year later found him in Pittsburgh with the Duquesne Light Company. After two years in the "smoky city," he came back to New York to work with the Combustion Engineering Corporation as a Service Engineer. Then in 1924 after a brief interval with the Paper Utilities Corporation he received his connections with the Brooklyn Edison Company where he is still doing design, research and testing work. Time Marched On. 1924 gave way to 1925 and in that eventful year Mr. Entenmann became an instructor in the Night School Engineering Laboratories. During this time he was studying in the Day School of Technical Science and the following year, 1926, was awarded the Mechanical Engineering degree. Mr. Entenmann is an Associate Member of the A.S.M.E. and also a frater in Sigma Alpha Pi. Hardly to be overlooked are Mr. Entenmann's hobbies, which are as numerous as his capacities for work. They include fishing, golfing, hiking, horseback riding, skating, swimming, yachting, theatre-going, reading and discussion groups of business and social problems.

### WILLIAM T. PETERSEN

Mr. Peterson first gave expression to his mechanical abilities in 1921, doing plant efficiency and private power production work in the Statistical Division of the Fifth Avenue Building Company Power Plant. He forsook this position for one with the New York Edison Company in 1924 where he was employed at mechanical and electrical construction and maintenance. Then in 1925 the Electric Bond and Share Company engaged his services for power plant and construction enterprises. During all this time Mr. Peterson was attending classes at Cooper Union Night School of Engineering. In 1927 he graduated with a B.S. in M.E. degree and in the same year obtained a position with M. W. Kellogg Company for whom he is working at present, undertaking gasoline and lube oils research after having given satisfactory results in a variety of other departments in the same Company. Like so many other instructors in Cooper Union, Mr. Peterson's appetite for a more extensive grasp of his chosen subject led him to pursue Post-Graduate work. He attended Rutgers College in 1929 studying Petroleum Refining, his present occupation. He also further educated himself at the New York Edison School for Employees by studying motor design and construction during his night course here in 1925.





FRED E. FOSS  
Professor



RAY C. BRUMFIELD  
Assistant Professor

## CIVIL ENGINEERING DEPARTMENT

### FRED. EUGENE FOSS, Professor

With four degrees after his name and many, many years of engineering and teaching behind him, Prof. Foss is still human and likable. He likes to fish for hour after hour in the woods in Maine and finds it easier to catch the denizens of the streams than to find a student who knows the answer to a problem. Prof. Foss has to his credit an A.B., A.M., S.C.D., and B.S.; the first three at Bates College and the last at M.I.T. He helped build the Norfolk and Southern R.R. in North Carolina. His 49 years as a teacher included periods with M.I.T., Carnegie Inst. of Tech. and Penn College, with that title of "Professor in charge" at the latter two. Those of us who have taken civil service tests may have been examined by Professor Foss, for he was on the N. Y. Civil Service Com. staff for 19 years. Besides being in the Beta Kappa fraternity he holds honorary membership in the Phi Kappa Phi.

### RAY C. BRUMFIELD, Assistant Professor

Professor Brumfield's articles on Civil Engineering subjects have been internationally distributed through the media of the Proceedings of the A.S.T.M. and the A.S.S.T., also the International Journal of the Orthodontia aside from his book, "The Solution of Statically Indeterminate Structures." Upon his graduation with a B.S. in C.E. from Purdue University in 1912, Prof. Brumfield started a rapid climb to success. From a detailer on bridge structures in Kansas City, Mo., in five years, he became resident engineer in charge of construction of concrete factory buildings for a Philadelphia, Pa., firm. In 1919 he came to Cooper Union as an instructor and in three years was promoted to the Assistant Professorship. His chief hobby seems to be work and more of it. Every spare minute in every vacation is spent at the bench in his laboratory or in the field whether it is a job for some company or a treatise for an engineering publication. He is a member of the Tau Beta Pi.

### GILBERT MORRISON

Mr. Morrison has been structural engineer on many large buildings in New York City, Rochester, Philadelphia, Washington and Detroit. His engineering experience is quite varied. Such railroads as the Phila. & Reading, Atlantic City, Penna., N. Y. Central and the I.R.T. have taken advantage of his services. Other employers of his were the Quantity Survey Co., Austin Mfg. Co., and H. G. Balcolm. Not satisfied with making money for others, Mr. Morrison has engaged in the private practice of general contracting. His appointment to Cooper was not his first taste of teaching, having previously been on the faculty of the Penn State College and the Stevens Institute of Tech. Mr. Morrison is a member of the Amer. Soc. of C.E., N. Y. Soc. of Prof. Eng., S.P.E.E. and the International Acacia Collegiate Fraternity.



### J. PAUL J. WILLIAMS

Few men on the teaching staff of any college have had the varied experience that Mr. J. Paul J. Williams has had. He has been Associate Editor of Engineering Record and Engineering News-Record, and Editor of Proceedings and Transactions, American Society of Civil Engineers, and has been an instructor in the University of Pennsylvania, Swarthmore College, University of California, Columbia University, and the University of Minnesota. He has also been on the Engineering staffs of such concerns as The Southern Pacific Railroad, The Baltimore Bridge Co., McClintic-Marshall Construction Co., and The Concrete Steel Engineering Co. He received his B.S. and M.S., and C.E. degrees from The University of Pennsylvania, and in recognition of his scholastic standing and his experience, he has been elected a member of Sigma Xi, the national honorary engineering fraternity. Not all his time, however, has been dedicated to work, for he has found time for his favorite sports, Tennis and Cycling. With Joe Williams, newspaperman, he once held the world's speed record for the unpaced-mile on tandem bicycles.

### LAWRENCE PEREZ

Mr. Perez has a unique hobby. In a complete woodworking shop of his own he develops furniture of original and copied designs for his friends. Previous to his appointment to the Civil Engineering Department in 1929 Mr. Perez received a goodly store of practical knowledge in the civil engineering field. He has been a computer for the Harmon Development Corp. and has worked on concrete detail for the Concrete Steel Co. His teaching experience includes a year at the Stevens Institute Summer School, and four years with the Brooklyn Polytechnic Institute. The latter was the college at which he earned his C.E. degree in 1929. He is a member of the Society for the Promotion of Engineering Education.

### JAMES P. O'DONNELL

Mr. O'Donnell's experience covers wide territory. At one time engaged in the electrification of the Pennsylvania R.R. while in the employ of Gibbs and Hill, we next find him compiling topographic maps from aerial surveys for the United States Coast and Geodetic Survey. Similarly with his education, not satisfied with his B.S. at Cooper Union, Mr. O'Donnell jumped to the University of Illinois for an M.S. degree. His ability to absorb facts quickly is evinced by his wide changes in employment and education. However, his hobbies are closely related. They include all sports, chiefly baseball, swimming and handball.

### M. H. VAN BUREN

Mr. Van Buren has a hobby that is quite common among the Cooper Union instructing staff, namely, photography. No doubt, in his 18 years in the engineering profession he must have collected some interesting pictures. During that period of time he was engaged in detail design and manufacture of steel, concrete, and machinery problems. He specialized in bulk material handling while doing railroad, industrial and utility construction. Mr. Van Buren is a member of the Phi Sigma Omega fraternity.

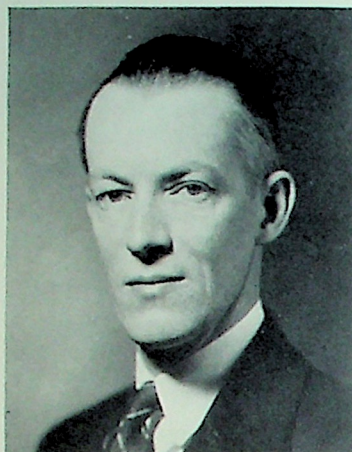
### WILLIAM E. BROWN

Like Einstein, Mr. Brown is a violinist. Their relative capabilities in music no one knows, but, when it comes to engineering, Mr. Brown can match his experience with any man. Such great undertakings as the Pennsylvania East River Tunnel, the Catskill Water Supply, and the Hudson-Manhattan Tunnel found him on the engineering staffs. He also spent some time with the N. Y. Rapid Transit, the Underpinning and Foundation Co. and the Electric Bond and Share Co., making a grand total of 27 years in the field before joining the faculty of the Cooper Union. He possesses the degrees of B.S. and C.E. and is a member of the American Society of Civil Engineers.

### CHARLES C. ROTH, JR.

Mr. Roth is a great believer in the outdoor life and enjoys such hobbies as tennis, baseball and swimming. No doubt his love for the great open spaces originated during his field work while designing railroads and highways for the Reading R.R. Pennsylvania R.R., United Engineering Construction Co. and the Martin Contracting Co. These seven years' experience qualifies him to teach at such schools as Drexel Institute, and Yale summer school, besides Cooper Union. Mr. Roth's Alma Mater is the University of Delaware where he received his B.S. in 1925. He is a member of the Theta Chi and the Phi Sigma Omega fraternities.





NORMAN L. TOWLE  
Professor

## ELECTRICAL ENGINEERING DEPARTMENT

NORMAN L. TOWLE, Professor

When Westinghouse opened its doors to Norman L. Towle in 1917, little did they know they were employing a future professor. That year and the following he busied himself in graduate and research work in what was then the new Research Department under Spooner, author of many texts on electrical theory. In 1918 his efforts were rewarded with a promotion to the engineering staff of the same company. He left to teach and the one year interval between 1919-1920 found him imparting his knowledge to embryo engineers at Iowa State College. This same year, 1920, Worcester Polytechnic Institute conferred the degree of Electrical Engineer upon him. His next pedagogical move was from Iowa State College to Cooper Union where he took charge of the Electrical Laboratories and later, in 1932, was given the Professorship of the Department when that position was vacated by the untimely death of Dean Hartman.

This eligible bachelor derives great pleasure from bridge à la Culbertson and from his summer vacations which he spends at Martha's Vineyard, swimming and taking it generally easy. He is active in such groups as the American Institute of Electrical Engineers, The Society for Promotion of Engineering Education, the national honorary engineering fraternity, Tau Beta Pi, and the research fraternity, Sigma Psi.

ABRAHAM J. B. FAIRBURN

This little man of great accomplishments, whose digressions on problems of life are as instructive as those of his on machine design, received a degree of B.S. in Electrical Engineering in 1925 from Penn State. In 1929 Columbia conferred upon him a Master of Arts degree. It is incredible that a man of his age has found sufficient time to have been professionally connected with such institutions as the Pennsylvania Railroad, the Aluminum Company of America, the U. S. L. Corporation of Niagara Falls, the Chenango Furnace Steamship Co., the Becker Steamship Co., the Toronto Hamilton and Buffalo Transportation Co., the U. S. Army Air Service, the Standard Aircraft Corporation and the New York Edison Co. He is a member of the Sigma Alpha Pi fraternity of Cooper Union and it was through his efforts that the American Institute of Electrical Engineers, of which he is a member, established a student branch in the Night School. The Electrical Engineering Laboratories are under his supervision. His hobbies are fishing and boating and in spite of his other activities he has found time to convert a life-boat into a good sized cabin cruiser. Ever the engineer at heart, he hopes to be able to get a gang of the boys together and completely renovate an old sawmill and power-house which is near his birthplace in Canada.

F. HOWARD TALLMAN

Gauss' Theorem and F. Howard Tallman are invariably associated by every student in Electrical Engineering, very much like the integral sign is associated with calculus. When, in 1929, the Institute of Technology held their annual commencement, a B.S. degree was conferred upon him, but before leaving our portals his Alma Mater offered him a



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position on the teaching staff. However, his desire for the exploration of outside worlds led him to East Pittsburgh and the research departments of Westinghouse, where he remained for a period of some eight months. At the completion of this period, he returned to Cooper Union in the capacity of instructor. At this same time he and several other members of the same department instituted the revised course in the third and fourth year of Electrical Engineering, he being the member elected to present one of the most difficult subjects of the new curriculum, namely, Electro-dynamics. He is exceedingly modest and refuses to comment on his achievements, but it has been through his efforts that most of the precision instruments in the Electrical Measurements Laboratories of the department have been renewed and brought up to date. He professes to have no hobbies, but it is known that his one favorite dish is mince pie, which he used to enjoy at "Charlie Heitmann's" when he was attending the Tech courses. For those who might wish to know, the F. before his name stands for Frank.

### ERNEST W. STARR

"I've red hair and freckles." Thus, typically, did this well liked instructor reply to our inquiry regarding himself. Ernest Starr graduated from Cornell University, receiving a B.S. in Electrical Engineering in 1924. After gaining a year of practical experience with the General Electric Company he returned to teach in his Alma Mater for the two years ending in 1927. Then on to the Worcester Polytechnic Institute he went. He taught there for the next three years, concurrently working with the American Steel and Wire Company in their power cable department and then returned to the General Electric Company. Finally, in 1931, came that coveted honor. He was appointed an instructor in our Electrical Engineering Department. He has since established himself as an understanding tutor and a real good fellow. His interest in our extra-curricular activities is evinced by the active position he is fulfilling on the Advisory Board for that purpose. He is a member of the Eta Kappa Nu and Tau Beta Pi fraternities.

### ALBERT GOERTZ

For the past thirty-two years Albert Goertz has been on the engineering staff of the Board of Transportation of New York, working on the New York subway plans. For a period of eighteen years he has been a Design Engineer on this staff. This venerable gentleman received his primary education in private schools, and obtained his B.S. in C.E. from Cooper Union in 1905. He then enrolled in the Electrical Engineering course, but did not continue with further study, when in 1908 he was appointed a member of the teaching staff. For the services rendered to his school, and his experience obtained in the outside fields he was given his professional degree of Civil Engineer. He professes to have no hobbies other than the reading of laboratory reports, but when he is cornered in a conversation he really reveals that his whole interest is devoted to Science.

### CHARLES ZELLER

Charles Zeller is best known to the students of Electrical Engineering as a very efficient instructor in A.C. Theory and Machines, but in the Department he has the reputation of being exceedingly quiet, though by no means reticent. He is the proud possessor of an Electrical Engineering degree which was conferred upon him after studying at the Brooklyn Polytechnic Institute. All his field experience has been acquired through years of service in the Testing Bureau of the New York Edison Company. He professes to have no hobbies other than his work, but by this it is not meant that he is a dull fellow. Very much to the contrary, he greatly enjoys a friendly chat at any time (particularly when the chat is informally over a glass of beer).

### PHILIP NUDD

Imagine a quiet, quick thinking, level-headed fellow who is never flustered regardless of the verbal barrages hurled at him and you have a clear picture of Philip Nudd. This gentleman, the latest addition to the staff of the Electrical Engineering Department, received his B.S. degree at the University of New Hampshire in 1930, and his Master's degree at M.I.T. in 1933. In this three year interval he carried on in the graduate study courses offered by Westinghouse and General Electric and did extensive research work at Schenectady, N. Y. and at Pittsfield, Mass. It was due to his efforts in the fields of science that he was granted a Coffin Fellowship at M.I.T. and, on the completion of this post-graduate course, he came to Cooper Union, as an instructor in both Alternating and Direct-Current theories and laboratories. Athletics are his forte and while in college he received his class numerals in Cross-country. He greatly enjoys hiking and swimming, but he readily admits that he likes nothing better than to don a pair of skis or snow-shoes and tramp through the neighboring woodlands of his native state, New Hampshire.





ALBERT B. NEWMAN  
Professor



HENRY C. ENDERS  
Assistant Professor



JAMES COULL  
Assistant Professor

## CHEMICAL ENGINEERING DEPARTMENT

### ALBERT B. NEWMAN, Professor

Dr. Newman, a distinguished looking gentleman and a popular professor, has been in charge of the Chemical Engineering Department at Cooper since 1928 when he received a Ph.D. in Ch.E. from the University of Michigan. It was after seventeen years experience in the industry that Dr. Newman came to Cooper. In this period, he worked particularly on sulphuric acid manufacture, roasting ores, Glauber's salt and did general research work. The author of numerous publications, Dr. Newman also holds two U. S. patents on concentrating acids and roasting ores. Several of his publications are at present being used as post graduate texts at our leading universities. He lives at the 5th Avenue hotel, but can always be found at his office (including Saturdays and Sundays). He is married and has two children. He spends summers in Canada motor boating and winters in New York. Professor Newman is a member of numerous professional societies and serves on many of the committees of these. At present he is being kept very busy by his task as chairman of the registration committee for the Chemical Industries Tercentenary.

### HENRY C. ENDERS, Assistant Professor

An ardent and diligent worker, Professor Enders, one of the most popular of the Cooper faculty, has been training Cooperites since 1903. He himself possesses a B.C. and Ch.E. from Cooper and an A.M. from Columbia. His lectures, during which he regales listeners with the lore of his travels and experiences, are extremely popular with Cooper students. His personal popularity is attested by his election to honorary membership in the Omega Delta Pi fraternity. In his early days, Professor Enders maintained a large consulting practice but, of late, he has devoted more of his time to professional societies. He is a member of the American Chemical Society, the American Association for the Advancement of Science, the American Geological Society and the American Institute of Chemical Engineers, to mention only a few. Professor Enders is very fond of travelling. His hobbies are the collecting of mineral specimens, gardening and landscaping. He is married and lives in New York City.

### JAMES COULL, Assistant Professor

A canny Scot, Professor Coull is one of the younger men noted for brilliant work in theoretical chemistry. He first distinguished himself at the University of Aberdeen in Scotland when in 1924 he won the Yuill traveling scholarship to M.I.T. after being awarded a B.Sc. degree. Following a year at M.I.T. he was engaged in research by the Tide Water Oil Co. until 1927. Since that time, Professor Coull has done consulting Physical Chemistry work for various concerns. He has also attained an A.M. in 1924 and a Ph.D. in 1934 from Columbia University. A man of medium height and stocky build, Professor Coull has the visage of a scholar. He is lauded by students for his efforts to master one of the most difficult chemical fields and his fine publications testify to the brilliance of his researches. Professor Coull is married and resides in East Orange, New Jersey.

### HENRY B. HOPE

With a Ch.E. from Rensselaer Polytech, and after several years experience in an electro-chemical plant, Mr. Hope came to Cooper in 1926. Four years later he was granted



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an A.M. at Columbia. Teaching both Day and Night courses, he quickly became one of the best liked instructors. He was elected to honorary membership in the Sigma Alpha Pi fraternity and was selected as faculty adviser to many activities. Mr. Hope's popularity has not in any way affected his position as an instructor since he has the knack of being friendly yet firm with all students. He is fond of hunting and fishing and many a week end will find him off in the wilds. He is married and makes his home in Brooklyn. Professionally, the work which Mr. Hope has done has been cited in many technical magazines. He is a member of the American Chemical Society and the Society for the Promotion of Engineering Education.

### ALLAN L. TARR

Slim, quiet and of serious mien, Mr. Tarr appears to have but one interest in life, metals. Here, as often, appearances are deceptive. He is a man of many interests, who is very well read and is fond of outdoor sports, particularly swimming and boating. However, the study of metals does remain his chief interest. Since his graduation from M.I.T., Mr. Tarr has been engaged in the study and teaching of metallurgy and he is familiar with smelting plants all over the country. He is affiliated with the American Institute of Metallurgical Engineers and the American Metals Society. He is studying at Columbia for an M.S. degree. Mr. Tarr is married and lives in New York City.

### RAYMOND J. F. KUNZ

Mr. Kunz is the youngest of our Chemistry instructors, an alumnus in whom we have reason to take pride. Graduating at the top of his class in 1931 and taking part in almost every extra-curricular activity, he left a record with Cooper which will be a target for many students. Prior to teaching here, Mr. Kunz was engaged in the production of special alloys and in research on refrigeration equipment. Last year he was given a Ch.E. degree by Cooper. Mr. Kunz displays the ambitions of the true scholar, attending Columbia during his spare time for an M.S. degree and Michigan during the summer for a Ph.D. degree. Fraternally, he is a member of Omega Delta Phi, which he joined while a student here. He is also a member of the American Chemical Society and the American Institute of Chemical Engineers. His hobbies are plantology and home gardening. Mr. Kunz is unmarried and lives in Union City, New Jersey.

### CLARENCE S. SHERMAN

Dr. Sherman is one of those broadly educated men who can converse intelligently on almost any subject. Though a young man, he already has amassed a great deal of knowledge through study and travel. He has been awarded a B.S. in 1927, an M.S. in 1928 and finally a Ph.D. in 1930 from Brown University. After finishing college, Dr. Sherman taught for a year and did research work for the Du Pont Ammonia Corporation. Since coming to Cooper Union, he and Mr. Kunz who are close friends, have done a great deal of spare time work in improving the facilities and appearance of the laboratories. "Doc" is extremely affable and likeable which explains his great popularity. He has a charming wife and child. He lives in East Orange; is fond of music, goes in for making lantern slides in his spare time; and yet on a party, just one of the boys.

### RAYMOND SZYMANOWITZ

From the standpoint of experience, Mr. Szymanowitz is one of our most versatile instructors. In addition to routine analysis and control work, he was engaged in production of benzidine dyes, and dye intermediates by electro-chemical methods before entering his present work of producing graphite and applying it and various colloids to industries. He has also published many articles in English, French and German on widely varying topics. Mr. Szymanowitz has been teaching at Cooper since 1924 having gained his B.S. here in 1922. He is affiliated with the American Chemical Society and the American Institute of Chemists. Married, he lives at Hillside, New Jersey. Motion picture photography is his leading avocation. His ex-students will tell you he's a swell man to have at a class dinner, and they're right.

### GEORGE S. MUELLER

With two years experience as a food analyst behind him, Mr. Mueller became affiliated with Bell Labs in 1921. Here he conducted research work on rubber and he has become so well acquainted with the application of rubber to industrial uses that he recently published an article on the subject. Mr. Mueller has been teaching at Cooper for two years. He is a member of the American Chemical Society — lives in Richmond Hill — married and has one child. Chief of his hobbies is photography. Recently he bought a new Graflex of which he is quite proud and he will tell you all about it, in a very interesting manner, upon the slightest provocation.





CARL ROSSMASSLER  
Professor

## MACHINE DESIGN DEPARTMENT

### CARL ROSSMASSLER, Professor

In the year 1901 Carl Rossmassler received the degree of B.S. from M. I. T. With such a background it was impossible to keep him down. For two years after his graduation he worked for the New York Shipping Company in the capacity of a hull inspector. To broaden his education, Mr. Rossmassler took a job with the Electro-Dynamic Co. of Bayonne, N. J. He started as a menial office-worker but finished as a designer. This job lasted until 1907, at which time Mr. Rossmassler decided to start a business of his own building small electric motors. Now his experience with the Electro-Dynamic Co. was of invaluable aid to him. During the war, Mr. Rossmassler served his country in the Naval Bureau of Construction and Repair. At the conclusion of the war he continued his relations with the Navy, by working as a foreman in the machine shop that supplied "do-dads" for the Navy. In 1920 Mr. Rossmassler started as an instructor and all-around man in Cooper Union. It was not long, however, before his genial, outstanding character and his ceaseless and tireless energy, were recognized by being awarded a professorship. Due to his full schedule he has been unable to cultivate any hobby; however, he saves all his energy until the summer vacation, at which time he journeys to his home in the mountains, where he acts as combination plumber, laborer, carpenter and jack of all trades. He did, however, once start to build a boat, but sold the unfinished hulk to get married. To quote him:—"I play rotten bridge, and am not old enough to play golf." As busy as he is, he has still found time to devote to the three societies, to A.S.M.E., S.A.E. and S.P.E.E.

### C. HIGBIE YOUNG

Mr. Young cast off his anchor and went out on the tide of human events some years ago as a ship surveyor. His eight years of experience in this line founded his avocation. His hobby is yachting, his tastes maritime and his favorite line is that he is married to the mate of the good ship "Wyphani" (Wife and I). Get the point? The surveying job was not the only one. He has held other positions, among them shop superintendent for two years. His most recent accomplishment is the gaining of a Mechanical Engineering degree at the New York University last year, 1934. In spite of all his other voyages he likes his present harbor, Cooper Union. Good sailing, Mr. Young!

### AUSTIN H. CHURCH

Cornell University gave Mr. Church his M.E. in 1928 and six years later he had earned his Sc.M. at New York University. In the interim, he had spent two years with the Westinghouse Electric and Mfg. Co. as a technical apprentice and junior engineer at their South Philadelphia works. Immediately prior to his appointment to the Cooper Union teaching staff in 1931, Mr. Church laid out power plants for estimating costs for the Lehigh Coal and Navigation Co. He and Mr. Young admit that they make up prob-



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lems so difficult that they are unable to solve them themselves. Mr. Church is a member of the A.S.M.E. and S.P.E.E. His fraternity is Tau Kappa Epsilon.

### JOHN WILLIAM LANGGUTH

John William Langguth, class of '97, has been actively connected with the teaching staff in the Machine Design Department of the Cooper Union for the past thirty-seven years. His services here began one year after he received his B.S. in Civil Engineering. The field experience of Mr. Langguth has been quite varied and has been mainly acquired in New York City's Department of Water Supply and in the City Engineer's Office of Bayonne, N. J. His services and knowledge of Civil Engineering has netted him a professional C.E. degree from Cooper Union and a Professional Engineer's license and a Land Surveyor's license from the State of New York. His favorite pastime is walking and the tramping grounds he enjoys most is the Bronx River valley where he partakes of 10-mile hikes whenever he is in the mood. Mr. Langguth is one of our active alumni members and was at one time the Vice-President of the General Science Alumni Association.

### OTTO G. PULLER

At one time it was possible for students graduating from one course to return to Cooper, and in the space of three years to graduate from another course, and in this way receive two degrees in the span of eight years. In 1913 Otto G. Puller received his B.S. in Mechanical Engineering, and in 1916 a B.S. in Electrical Engineering. The following year, 1917, Cooper Union awarded him a Professional Degree in Mechanical Engineering in recognition of his work in that field. For a period of two years he was engaged in the consulting field of engineering, in business for himself, and for the past fifteen years he has been in an executive position in the Bell Laboratories. His favorite pastime is swimming, and his professional activities are divided among the American Society of Mechanical Engineers, the Society of Motion Picture Engineers, and the Society of Professional Engineers. He is a member of the Omega Delta Phi Fraternity of Cooper Union. A student might feel in high spirits when he takes his plate up to this keen eyed instructor, but once those pocket dividers come out—well, it's best to pick your drawing up and go back to work.

### ROBERT SALMONSEN

Mr. Salmonsens, of our Machine Design Department, has two Bachelor and one Professional Degrees to his credit, all three having been given him here at Cooper Union. In 1924 he received his B.S. in M.E.; in 1926 one for C.E., and in 1931, his Professional M.E. Degree. For the long period of twenty years he has been in the employ of F. L. Sundth & Co., in the capacity of Mechanical Engineer designing and constructing machinery for the manufacture of Portland cement from raw materials. He just recently completed work on a new plant which was erected in the South. He, like a good many of his brother instructors, spends a great portion of his spare time swimming and fishing, and to hear some other gentlemen in the same department tell it, he is champ in the line of ping-pong. He is one of the many Cooper men who have gone out in the engineering world and shown what can be done with the extensive education received here.

### JOHN J. CURREY

In 1912 John J. Currey received a B. S. degree from Cooper Union, and six years later he was given his Mechanical Engineer degree for proficiency in his chosen profession. While here at Cooper Union he was President of the Students League, which was the forerunner of the present Students Council. His field experience has been obtained exclusively in the line of machine design in which field he has been active for the past twenty years, fifteen of which he has spent as superintendent of boiler and machine shops. "Quite a bit of experience for a young fellow," to put it in his own words. He is active in the American Society of Mechanical Engineers, and his favorite diversion is camping. It is his proud boast that he knows every suitable camping spot on the Atlantic seaboard from New York to the north end of Maine.

### KENNETH E. LOFGREN

Both Cooper Union and Stevens Institute of Technology have contributed to the engineering education of Kenneth E. Lofgren. In 1931, Cooper Union conferred upon him a Bachelor of Science Degree in Electrical Engineering, and in 1933 Stevens awarded him a Masters Degree. It was while he was still in his last year here in Cooper Union, that he started his course at Stevens Tech. Since 1934, he has been in the employ of the Fairchild's Aerial Camera Corporation, and here at Cooper he is best known to the student body as an instructor in machine design. He is a brother in Omega Delta Phi fraternity.





H. W. REDDICK  
Professor



WILLIAM J. PICKETT  
Assistant Professor



FREDERIC H. MILLER  
Assistant Professor

## MATHEMATICS DEPARTMENT

### HARRY W. REDDICK Professor

From Indiana University in the year 1904 came Harry W. Reddick with a crisp fresh A.B. under his arm; with this he approached the Alexandria Industrial High School where he taught for one year. Then, on to the Academy of the University of Illinois he went to teach and in that same summer vacation of 1905 he pursued graduate studies in the University of Chicago. The year 1906 saw Professor Reddick teaching mathematics in the Short Ridge High School of Indianapolis. However, University walls soon enclosed Professor Reddick again for in that same year we find him coming from the University of Illinois this time with an A.M.

We shift the scene from Illinois to New York and Columbia University where Professor Reddick continued his studies in mathematics as a full time student for one year, when in 1907 he was appointed Assistant in Mathematics. Two years later we find him in the capacity of instructor in this Institution and at the same time increasing his already plentiful understanding of mathematics. His unquenchable thirst for things scientific and mathematical brought him the rewards of a Phi Kappa Psi, Sigma Xi and finally in 1910 the coveted Ph.D. in recognition of his high standing and marked aptitude in the higher branches of mathematics.

The war and its emergencies made it necessary for the United States to draw forth the best of its available knowledge and talent, in furtherance of its cause. To this end Professor Reddick was assigned to Langley Field in 1918 to direct the mathematical computations on experiments in bomb dropping for the United States Ordnance Department. In recognition of Dr. Reddick's position in Pedagogy he was appointed in 1930 to the position of Director of reading of the College Entrance Examination Board in which capacity he served until 1933. Dr. Reddick's association with Cooper Union dates from 1915 in which year he left Columbia University to be appointed Professor and Head of our Department of Mathematics. Since this time he has been a familiar figure in Cooper's halls. His forceful and dynamic personality and his keen analysis of things mathematical are familiar to all of us who have studied in Cooper during these years.

Dr. Reddick's mind is so directed in the mathematical channels that it seems that he solves mentally the problem that you are about to present to him before you have completed its presentation. Our Head of Mathematics Department is well known among his brethren in the American Mathematical Association and the Mathematical Association of America.

It is our belief that Dr. Reddick's personality, aptitude and methods of teaching will go down through time in Cooper Union.

### WILLIAM J. PICKETT Assistant Professor

In 1902 we find an ambitious young student graduating from the Normal School in Oneonta, N. Y., and immediately fulfilling the position of principal of the elementary school in Calicoon Depot; thus our Professor Pickett started his career as a pedagogue. Since that time his entire life has been devoted to this field. He taught in the Newtown Collegiate Institute for two years, then returned to Teachers' College to further equip himself for the



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profession that has gladly welcomed him, and in 1909 received his Bachelor of Science degree. During the last year of this training he became an instructor of mathematics in Cooper Union Night School, a position which he held until 1919. Finally in 1928 we were again honored by his presence on our mathematics department staff, this time as Assistant Professor in which capacity he is still expounding the intrigues of Calculus to eager young engineers.

### FREDERIC H. MILLER Assistant Professor

The commendable record of Dr. Frederic H. Miller is one of which we are justly proud. Since gaining his B.S. in E.E. at Cooper Union Institute of Technology in 1926, he has added to his degrees by studying at Cornell where in 1927 he acquired his M.S., at Columbia where he was awarded his Ph.D. in 1932. One year after his graduation from Cooper he returned to his Alma Mater as an instructor in mathematics from which position he resigned in 1929 to accept a similar position with Columbia. It was while teaching there that he continued his studies aiming toward his Doctor of Philosophy degree. Upon the completion of these studies he again returned to Cooper Union to be appointed Assistant Professor in Mathematics. The standing of Dr. Miller in mathematical circles is further attested to by his membership in the American Mathematical Society and the Mathematical Association of America.

### CHARLES H. LEHMANN

Looking back to 1914, we see Chas. Lehmann working in a Power Plant and studying Mechanical Engineering at Cooper in the evenings. While still a young man, he was advanced to the position of Inspection Engineer and received his B.S. in M.E. in 1917. He returned to Cooper Union, however, with a never-failing eye to the future, to study Electrical Engineering and in 1919 began work as a Telephone Engineer. In 1922, the year before he completed the Electrical course to receive another B.S., our school recognized his excellent work in the field, and awarded him a Professional M.E. degree. The inevitable ties that bring students back to Cooper seized upon Mr. Lehmann in 1926 when he began teaching mathematics in the Night School. Three years later he gave up his engineering profession to devote all his time to our school in the day and night courses. Then in 1931, with all his previous erudition, it was with no difficulty that he earned an M.A. at Columbia. He is also a member of the Mathematical Association of America.

### DONALD C. MacLEAN

He must have been a smiling, good natured youth when he graduated from the City College of New York, and received his Bachelor of Arts degree in 1906, as we are sure one never acquires these traits teaching Mathematics. He has been an instructor since he left college and how well he knows the stories that make a subject interesting. From 1906 to 1910 he taught in Public School No. 6 in Manhattan. While teaching there he began to expand his training by taking Graduate Courses at Columbia University, and before he had completed these studies he received a position with Erasmus Hall High School in Brooklyn. When he finally completed these studies in 1913, he came with us to teach Mathematics and has since been one of the most popular teachers in this course. His position at the Erasmus Hall High School was advanced to that of Administrative Assistant in 1929. He held this position until last year when he finally came to devote the rest of his time to the Institute of Technology. His pounding, both verbally and physically is heartily received by all his student friends.

### E. G. TAPLIN

Mr. Taplin attended Columbia University and in 1915 received his B. S. degree. Starting young in life at his chosen vocation he began teaching mathematics at Kelvin School immediately upon graduation. While teaching at Kelvin School he returned to Columbia to continue his studies and was awarded a Master of Arts degree in 1915 from that university. His natural aptitude for teaching brought Mr. Taplin a position on our mathematics staff in the Night School of Engineering in the same year he had accomplished his M.A. degree. We are still being honored by his presence in our classes. In 1923 he left Kelvin School to instruct in Collegiate School where he is still enlightening students in the mysteries of mathematics in the day time as he is here at night. His cool, calm and collected disposition has never failed to impress the students.

### SYLVESTER B. SHERIDAN

The graduating class of Cooper Union Day School in 1910 had Sylvester B. Sheridan B.S. as a classmate. Although he attempted other endeavors, the interest in Mathematics inculcated in him while a student here brought him back five years later to teach the subject in our night school. Since then he has continuously given practical advice to our



coming engineers. He is well equipped to give this counsel as he has been employed as Assistant Engineer to the Board of Estimate and Apportionment of the City of New York, since 1921. While working in the day and teaching here at night, his versatility brought him a position from 1923 to 1927 as Instructor of Surveying in the Civil Engineering course at Stevens Institute of Technology.

## JOSEPH J. TANZOLA

Our genial, jovial and fraternal Joseph J. Tanzola has a history of par excellence. He was not satisfied with the B.S. Degree he received from Columbia University in 1914 so he returned to win himself the degree of Master of Arts in one year more. For his high academic standing he was awarded a Phi Beta Kappa and for his scientific excellence a Sigma Xi. There is no doubt that the valuable tutelage he received under our Professor Reddick, who was then teaching at Columbia, augmented his own natural talents. For the year following his graduation he taught mathematics in our night school and in 1919 returned once more to join our teaching staff. Our day school profited by his instructions from 1920 to 1921 as our night school continues to do. For the last 14 years he has been employed as Accountant and Assistant Actuary Auditor for the Department of Finances of our City. In addenda we add that he is a member of the American Mathematical Society and of the Mathematical Association of America, and our Phi Sigma Omega Fraternity.

## EDWARD J. LARKIN

The Class of 1912, Cooper Union Night School put forth into the world of business and science, one Edward J. Larkin, B.S., together with its other members. Mr. Larkin has evidently progressed and expanded in this world, for in 1917 we find him appointed to the capacity of Assistant Engineer to the Board of Estimate and Apportionment of the City of New York. Here Mr. Larkin's service is to use his technical knowledge and keen mathematical analysis to aid direction of public moneys in the channels that will be the most beneficial and profitable for the public. The year 1920 finds him returned to the school from which he matriculated and therein installed in the position of an instructor of mathematics. Mr. Larkin has continued to teach mathematics in his Alma Mater from that date until the present time. He has continued to exhibit an increasing interest in mathematics and allied sciences. In furtherance of this we find him, as are many of his brother instructors, a member of the Mathematical Association of America. Mr. Larkin has the honor of being in a position wherein he may render a dual service to society. The one a direct application of his abilities to the proper administration of the public funds and the other of fitting the forthcoming Engineer to step into positions of merit in the technical and business world. He is a member of Omega Delta Phi.

## A. H. BEILER

Mr. Beiler has found an outlet to his enthusiasm for mathematics in teaching the subject since 1928. Not so long ago he was a student at Cooper Union having received his B.S. in E.E. in 1925. With practically 20 years electrical engineering experience with the New York Edison Co., Interborough Rapid Transit Co., and the American Gas and Electric Co., he received the honorary E.E. degree from Cooper in 1930. His ambition has been to become an authority on the theory of numbers and he has often intimated the expanse of this great subject by mentioning that it would take 12 years to master but one branch. Many students are grateful to Mr. Beiler for his calm elucidations and interest in mathematics he has created by his varied practical and recreational applications of the subject. Between working in the day with the American Gas and Electric Co. as an Electrical Engineer and teaching here at night, he finds time for relaxation by delving into the Theory of Numbers, Photography, checkers, hiking, and even roller skating.

## FRANK J. MACKIN

The students and friends of Dr. McMackin will indeed be pleased to read this resumé of his accomplishments that are part of his pleasing personality. To commence with, he was awarded a B.S. at Columbia University in 1912 and an M.A. in 1913. For the next three years while he was earning his Doctor of Philosophy degree he acted as Assistant in Mathematics in that University. There the Sigma Xi key was given him for his pre-eminence in engineering. Continuing his vocation he taught in the Jersey City Dickinson High School from 1916 to 1926. A year after his appointment there he began his career with us and since then only for the short period from 1924 to 1926 have we been deprived of his valued good fellowship and intelligent teaching. Step by step he made progressive changes and we find him from 1926 to 1928 as the Vice Principal of Lincoln High School, Jersey City; from 1928 to 1933 again with the Dickinson High School, this time as Vice Principal; and in 1933 on to the inevitable, Principal of that School. His record and indubitable ability led the Association of Mathematics Teachers of New Jersey to proclaim him President in 1934.

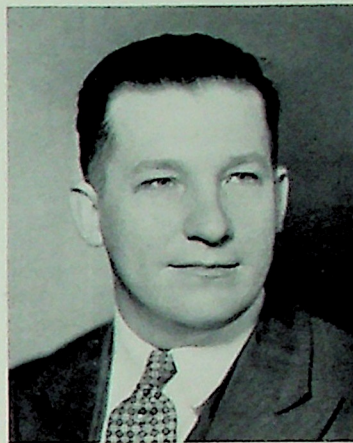




ALBERT BALL  
Professor



KARL HAUPTMANN  
Assistant Professor



HAROLD W. MERRITT  
Assistant Professor

## PHYSICS DEPARTMENT

### ALBERT BALL, Professor

Albert Ball began teaching before completing his education. His first pedagogical position was held when he was 17 years old. A year and a half later he entered the Fredonia Normal School. He was honored at graduation with an appointment to the position of principal of Belmont High School. At the age of 21, his thirst for knowledge not yet sated, he entered Cornell University, a member of the class of 1901. With his B.A. degree he received special mention in mathematics and physics. He next spent four years at Pratt Institute as an instructor in physics. He came to Cooper in the same capacity until he was promoted to Assistant Professor in Physics. Within five years he was advanced to Professor in charge of the department. Professor Ball's lectures can compete with any Broadway stage production. Physics, in general, is a bugaboo to the average student, yet there are very few who would willingly miss any of his talks. He manages to give to the subject an aroma of enchantment. Professor Ball wears the pin of Sigma Psi. He is also a member of the American Association for the Advancement of Science, Society for Promotion of Engineering Education, American Physical Society, and he is an associate member of the A.I.E.E.

### KARL HAUPTMANN, Assistant Professor

Professor Hauptmann's innate curiosity has led him from one hobby to another. The possession of one of the first Cadillac automobiles caused him to delve into the mysteries of its gears until his mechanical ability started him on the repair of watches as a hobby. For proof of his proficiency we only need watch him repair sensitive galvanometers in the laboratory. Simultaneously, he became interested in music. In learning to play the piano, he became engrossed in tuning the instrument. Logically enough, he next engaged himself in the manufacture of tuning forks which are now packed away in the attic of his home while he seeks a new hobby. Prof. Hauptmann graduated from both Day and Night Schools of Cooper. This was due to the incompleteness of the courses offered in 1903. He is one of the founders of the Omega Delta Phi fraternity. Previous to his appointment to the Physics Department in 1904, he was employed by the New York Telephone Company's Engineering Department. Prof. Hauptmann spends his summer vacations at his home in Spring Valley raising flowers in his garden.

### HAROLD W. MERRITT, Assistant Professor

Dickinson High School in Jersey City presented Harold W. Merritt with a diploma in 1916. He then entered the employ of the Duplex Engine Governor Co., of Brooklyn as a draftsman. His diligence and acumen earned him a promotion to Research Engineer. All this while he had been attending Cooper Union Night School and received a B.S. in M.E. in 1921. However, he continued for two more years in Cooper taking a course in Motor Vehicle Design. His first appointment as an instructor here was in 1923. He advanced quite rapidly, holding positions both in the Mechanical Engineering and Physics Departments, until he achieved the appointment to the faculty as Assistant Professor in 1933. While a student, Prof. Merritt joined the Sigma Tau Rho Fraternity and recently was made an honorary member of Lambda Sigma Kappa. He was the first President of the first



professional society, the A.S.M.E. Prof. Merritt is not yet through with his studies, and is now attending N. Y. U. in order to obtain the recognition of the Regents Board for his Cooper Degree. His time thus occupied, he is unable to indulge in his hobbies which consist of gardening, swimming and fishing.

#### WILLIAM E. BOSSERT

In 1901, William E. Bossert arrived in New York and secured a job as a shipping clerk and soon after entered the services of Cooper Union, acting as an assistant to the late Professor Anthony. However, due to the nature of his work as Prof. Anthony's right-hand man, he was not able to proceed with his own career in the Electrical Engineering course as the other members of his class, and had to take the course in a piece-meal fashion, receiving his degree in 1917. In 1920 he was appointed a member of the teaching staff, and his efforts have been dedicated to laboratory and lecture instructions in the Physics department. Being a regular fellow, he enjoys putting on the boxing gloves with any willing opponent, and from the stories told of his prowess, he usually gives his adversary a real work-out. He and Prof. Ball are inseparable companions in the lecture halls and laboratories, and the two can be found spending a good portion of their time playing bridge. In the summer he spends his time as a gentleman farmer on a Sullivan County farm, playing golf during the week-ends and perfecting his skill at rifle shooting, of which he is very fond.

#### HUGH HALSEY

Whether Mr. Schauss is following Mr. Halsey around or vice-versa has not been decided as yet. Both of them grew up in the same town and together they graduated from Cornell, Mr. Halsey receiving a Bachelor of Arts degree. Here they are now teaching at Cooper Union in the Physics Department. Mr. Halsey's thirst for knowledge has not been quenched up to this time. He is now working for an M.A. at Columbia and expects to go on to a Ph.D. His chief hobbies are correcting lab reports, photography and music. He owes his military carriage to summers at the R.O.T.C. camp. To show how Cooper drafts its instructors from the ends of the earth, note that Mr. Halsey was born in the Philippine Islands.

#### J. CHARLES REIDEL

If one doubts Mr. Reidel's prominence among engineers one needs but glance at this list:

President of the Association of Engineers of New York, Vice-President of the New York State Society of Professional Engineers, Past President of Municipal Engineers of New York, Past President of Brooklyn Engineers Club, Member of Committee of American Society of Civil Engineers on accredited schools, also the Committee on Specifications for Bricks of A.S.C.E.

Mr. Reidel's experience after his graduation from Cooper Union in 1898 was gained chiefly with the Bureau of Sewers of the City of New York. His excellent work, a sample of which is the design of the largest sewer in the world, brought him promotion to his present position of Deputy Chief Engineer of the Board of Estimate and Apportionment. Of his connection with Cooper one must mention that he was the first assistant to late Professor Anthony when the Physics course was started. A year later he was appointed with late Professor Hartman to the first group to develop the modern course. He is a past president of the Cooper Union Alumni Federation. The explanation behind his frequent references in his lectures to marine subjects lies in the fact that he was formerly President of the N. Y. Nautical School Association.

#### ROY W. BURNS

Since 1922, Roy W. Burns has been rendering most competent services to the Physics Department. This gentleman has had a most interesting and varied life, being both a scientist and a soldier. Since the war he has been with the American Telephone and Telegraph Co. as a Development and Research Engineer, this scientific work being a continuation of a career began in the University of Indiana where he received an A.B. degree and completed in Purdue University, where he was awarded a B.S. in Electrical Engineering. In recognition of his work and services with the companies of the Bell System, he has been awarded the Vail Medal, only one of which has been given to the general staff of that organization. He is a member of the honorary scientific fraternity Sigma Xi, also Eta Kappa Nu and Sigma Pi. He was recently transferred from the 309th Engineers, 84th Division to the Signal Officers Training Camp. He is the proud father of two daughters and lists swimming as his main hobby. Because of his proficiency in this hobby he was able to rescue three persons involved in a Long Beach canal accident.

#### OLAF G. GERDIN

Mr. Gerdin was born in Bergen, Norway, and while still a boy, came to this country. He attended both Public and High Schools in an around New York City. Having made up his



mind to follow the engineering profession, he enrolled in the Cooper Union Night School and graduated in 1920 with the Mechanical Engineering Course to his credit. While at school Mr. Gerdin was a member of the Student's League and Student Council. Since graduation he has been connected with the Interborough Rapid Transit Company of New York as an engineer in their Economics Division. His work in this division has to do with the various engineering and economic problems of the present Transit System and planning for new developments. Here he employs both his mechanical and electrical engineering knowledge in questions pertaining to the generation transmission, conversion, and distribution of power for this system. Seeking still another outlet for his abundant resources, Mr. Gerdin joined the Instructing Staff of the School he had been a student at, not so long before. That is, he became an instructor in the Night School Physics Department in 1925. With the opening of the new Instruments and Auxiliaries Laboratory in 1927, he also became a member of the Mechanical Engineering Department and since then has divided his time teaching in the laboratories of both Departments.

## HERMAN STEMPER

A Bachelor of Science degree in Mechanical Engineering received from Cooper Union Institute of Technology in 1924, is the scientific foundation that Herman Stemper has for his field experience with the New York Telephone Company, in which organization he has risen to the position of District Plant Superintendent. He is a member of the honorary fraternity Sigma Tau Rho. His work in the Bell System and his classes in physics have so completely disposed of his time that he has not cultivated any hobbies, save a great desire to impart his knowledge in the unfathomable branches of physics to future engineers under his tutelage. While in the Day Tech he was known as a hard worker who had to scamper away after school to hold down a position with the Telephone Company.

## HENRY OTTEN

As evidence of Mr. Otten's insatiable search for knowledge is his varied interests such as membership in the American Physics Society, American Mathematics Society, American Association for the Advancement of Science, American Institute of Electrical Engineers and the Economics Club of New York. Still Mr. Otten has not neglected the social aspects of life being a frater of Sigma Alpha Pi. Generally, he has sought the most economical operation of power equipment. Immediately after graduating from Cooper Union in 1916 Mr. Otten was employed by the Bell Laboratories. Next came a position with the N. Y. Central Railroad, attempting to cut the costs of operation. His work won him his present position as Assistant Engineer in economics in the Motive Power Department of the I.R.T. He received the honorary degree of E.E. from Cooper in 1922.

## RAOUL A. FARALLA

Raoul A. Faralla stepped out into the world with a B.S. in E.E. with the Tech class of 1920, and then entered the Bell Telephone Laboratories where he carried on in the Telephone Research field. In 1930 he received his E.E. degree from Cooper Union for both this service, and his work as instructor in the Department of Physics. He is a quiet, fraternal fellow who takes great pride in his two hobbies, automobiles and radio. He is a very excellent auto mechanic, though he won't admit it. He is a member of Sigma Tau Rho, Beta Chapter.

## CARLYLE W. MILLER

Another outstanding example of the Cooper Union graduate who made good is Mr. Miller. Yet, he was not a "grind" by any means while at school here, and participated in extra curricula activities. He wears an Ex Post Facto key to testify to that. To one who knows his Cooper, that key means the culmination of earnest efforts in behalf of the Cable. Mr. Miller was a member of the Institute of Technology graduating class of 1927. Since then he was employed by the Westinghouse Electric Mfg. Co. as a sales engineer after attendance at their students course. It was not until Cooper brought him back to teach that he received his honorary E.E. degree in 1933. Mr. Miller is a member of the Mu Alpha Omega and Epsilon Alpha Pi fraternities. He also holds membership in the A.I.E.E.

## STANLEY LEWRY SCHAUSS

Mr. Schauss has finally rejoined his college mate, Mr. Halsey, with his recent appointment to Cooper Union staff of Physics instructors. The two have one hobby in common, photography. Mr. Schauss, however, finds greater delight in motoring and thinks nothing of driving home to Owego, N. Y., several times during the school year. Despite his Bachelor of Science degree in Electrical Engineering at Cornell in 1929 and five years with the Westinghouse Co., Mr. Schauss has set his mind on continuing his studies at Columbia next year. He wears the pins of the Phi Kappa Phi and Eta Kappa Nu fraternities.



## ACADEMIC STAFF

CARL C. BRIGHAM

Associate Professor of Psychology

WARREN G. FINDLEY

Assistant in Psychology

ELMER MANTZ

Instructor in Charge of English

THOMAS GARVEY

Instructor in Accounting

ROBERT CUMBERLAND

Instructor in English

F. CARL RIEDEL

Instructor in English

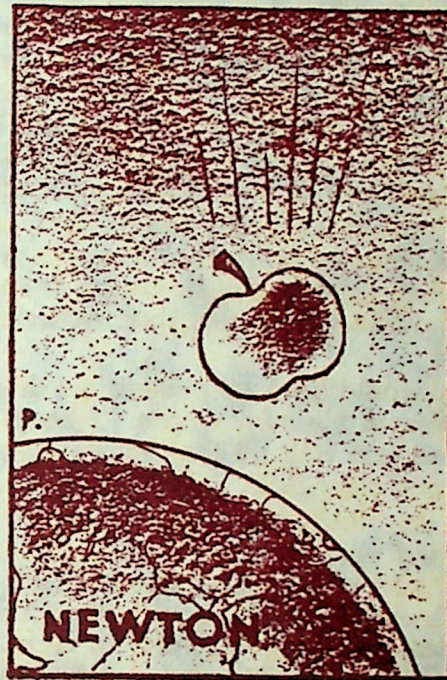
WILBUR G. VALENTINE

Instructor in Elements of the Physical World

EVERITT DEAN MARTIN

Professor of Social Philosophy





NIGHT SCHOOL  
OF ENGINEERING



# Sir Isaac Newton



**I**T took a kick in the stomach to start him on his career as the greatest genius the earth has ever known. Although clever at mechanical contrivances, as a boy, Sir Isaac Newton was slow in book-learning. The bully who administered the kick was far ahead of him at the Grantham Grammar School. In retaliation, Newton thrashed him soundly and surprised at the ease with which he had defeated the big fellow physically, so applied himself that he soon added an academic victory.

Sir Isaac made three famous discoveries, one in light, one in mathematics and one in astronomy; yet his modesty seemed to increase with each new finding. He is quoted as saying that, if he had seen further than most men, it was because he stood on the shoulders of giants, thus referring to his predecessors and contemporaries.

The famous apple story would have us believe his discoveries came as sudden inspirations. However, in his own words, "I keep the subject of my inquiry constantly before me and wait till the first dawning opens gradually by little and little into a full and clear light."

At the height of his career, Newton could have served as a pattern for every story told of absent-minded professors. He once invited a friend to dinner. When his guest arrived, he found the meal steaming on the table but no sign of the mathematician. Finally, when he could stand the pangs of hunger no longer, the friend sat down and ate everything in sight. Sir Isaac eventually arrived, lifted the cover of the main dish and, seeing the bones, said, "I forgot we have already dined."

On the occasion of another dinner, he had to go to the cellar to get a bottle of wine and on the way forgot his errand; went up to his room, put on a surplice and ended up in chapel.

It is said that while riding one day Newton dismounted from his horse to lead it up a hill and when he attempted to remount, found the horse had run away leaving him holding the bridle.

Many a time Newton had to rush back home upon the discovery that he had left half-dressed.

Sir Isaac Newton was so far above any man in mathematics that his professor at Cambridge University resigned in his favor. At one time, he solved a problem in one night that the greatest mathematicians in Europe had been unable to do in six months. Yet, he could not make up a common account and when he was appointed Master of the Mint, he was forced to have someone else keep the books. It was for his services in the Mint that he was knighted.

Although he took no exercise, indulged in no amusements, and worked incessantly for nineteen hours a day, he lived to the age of eighty-five years. He was buried in Westminster Abbey "like a king who had done good to his subjects."

Sir Isaac Newton's own comment on his career was, "I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me."



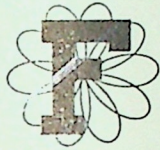








## MECHANICAL ENGINEERS



IVE long years ago, more than two hundred men selected by the merciless sieve of Cooper's entrance examinations, carefully guarded and treasured their admission cards. They prized them as the graduates prize their Cooper medals. These latter are precious, for back of them lies a story of perseverance. Though not all of the members of this class may see each other again after graduation they are all held together by that democratic tie, ambition.

It is no common feat to toil through years with no immediate reward. The inner flame of hope and ambition has kept these men going. For some, time and eventualities have managed to quench that flame. But, these men of the graduating Mechanical Engineering class have by their fitness survived. For that they deserve applause. Yet they admit they owe their success to the kindly assistance of their Professors and instructors. Nowhere else does there exist such a friendly relation between faculty and student body as here within the walls of Cooper. To the faculty, then, this class offers their heartfelt thanks and appreciation. Wistfully they say good-bye to these men who have served as guides along the road to knowledge knowing there will be few to offer the same helping hand on the road of life. The class as a body says not "Farewell" but "Fare-thee-well, Cooper!"

CLASS PRESIDENT.





CHARLES A. ARATA, B.S.  
"Skig"  
Mechanical Engineering  
Stuyvesant High School.  
A.S.M.E.



ANTHONY DIPRIMA, B.S.  
"Tony"  
Mechanical Engineering  
Boys' High School; Murray  
Hill High School.  
A.S.M.E.



WILLIAM EHRLICH, B.S.  
"Rad"  
Mechanical Engineering  
Boys' High School.  
1934-35 Class Secretary.  
A.S.M.E.

MICHAEL FEXAS, B.S.  
"Champ"  
Mechanical Engineering

De Witt Clinton High School.  
1930-31 Captain and Manager  
Wrestling Team;  
1933-34 Class President;  
1934-35 Class Vice-President.  
A.S.M.E.

LOUIS FOLTAN, B.S.  
"Lou"  
Mechanical Engineering

Vocational High School;  
Morris Evening High School.  
1933-34 Class Treasurer;  
1934-35 Vice-Chairman.  
A.S.M.E.

ISADORE HORBUND, B.S.  
"Irv"  
Mechanical Engineering

West Side High School, Den-  
ver, Colo.; Bushwick High  
School.  
A.S.M.E.





# T H E \* C A B L E \* O F \* 1 9 3 5



LEONARD A. KROLL, B.S.  
"Len"  
Mechanical Engineering  
New Utrecht High School.  
1934-35 Class Treasurer.  
A.S.M.E.



THOMAS E. MELICK, B.S.  
"Tom"  
Mechanical Engineering  
Fawcett School of Industrial  
Arts.  
A.S.M.E.



GEORGE NAGOSHINER, B.S.  
"Nag"  
Mechanical Engineering  
James Monroe High School.  
1931-32 Pioneer Staff, Track;  
1933-34 Football;  
1934-35 Class Pres.; Treas.  
Student A.S.M.E., Class Comm.

ARTHUR J. NELSON, B.S.  
"Arty"  
Mechanical Engineering  
Curtis High School.  
A.S.M.E.

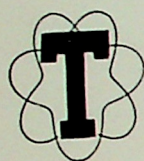
FRED W. SCHMIDT, B.S.  
"Smit"  
Mechanical Engineering  
Brooklyn Technical High  
School.  
A.S.M.E.

FREDERIK STEPHENSEN, B.S.  
"Steve"  
Mechanical Engineering  
Northport High School.  
A.S.M.E.





## CIVIL ENGINEERS



O some, five years is a long time. When we began our studies long ago, we felt that in five years time when graduation rolled around, we would be old men. It is surprising to find our youth and adventurous spirit still with us. Our parting is more like leaving an old friend, the parting being so heartfelt, not like leaving an institution of hard work. Such is our farewell to our Alma Mater, The Cooper Union.

No words can express our great appreciation and gratitude owed to the instructors and professors, who were so patient with us, and who so nobly overcame our lack of knowledge. We humbly express our gratefulness to those good men and to our helpful and most willing Dean.

Let not this farewell be a final farewell. Would that we meet again to renew the pleasant associations with each other and always keep in our hearts the pride in our Alma Mater. Our basketball team members, our lab squads, Cable officers, class mates, all can never say Goodbye. We already look forward to those joyful reunions when stories, and there will be a great many, will be told of occurrences during our five years work at Cooper, and the years to follow.

Graduation with cap and gown is a fitting ceremony to cap a great accomplishment but more, a glorious beginning to a successful life. We join a great multitude of successful graduates, a great fraternity of men who have respect for each other because of a good job well done.

Farewell to Cooper Union.

CLASS PRESIDENT



# T H E \* C A B L E \* O F \* 1 9 3 5



**FRANK CURTIS, Jr., B.S.**  
 "Frank"  
 Civil Engineering  
 Bushwick High School; Boro  
 Hall Academy.  
 A.S.C.E.



**TIMOTHY J. DRISCOLL, B.S.**  
 Civil Engineering  
 Curtis High School.



**JAMES L. DUNCAN, B.S.**  
 "Jim"  
 Civil Engineering  
 Paterson High School.  
 A.S.C.E.

**HARRY FARKAS, B.S.**  
 Civil Engineering  
 Miami High School, Miami,  
 Fla.

**SOLOMON FRISCH, B.S.**  
 "Sol"  
 Civil Engineering  
 1931-32 Varsity Basketball;  
 1932-33 Varsity Basketball;  
 1933-34 Varsity Basketball;  
 Class Sec'y;  
 1934-35 Varsity Basketball.  
 A.S.C.E., C.U.A.A.

**FRANCIS EMIL KNIPPER, B.S.**  
 "Frank"  
 Civil Engineering  
 Phi Sigma Omega.  
 1932-33 Class Treas.;  
 1933-34 Sec'y Students Coun-  
 cil, Business M'g'r. Cable,  
 Class Pres.  
 A.S.C.E., C.U.A.A.





# T H E \* C A B L E \* O F \* 1 9 3 5



EMIL J. KOCHMAN, Jr., B.S.  
"Kochie"  
Civil Engineering  
Stuyvesant High School.  
A.S.C.E.



JOEL KOEHL, B.S.  
"Jehol"  
Civil Engineering  
Alexander Hamilton High  
School.  
A.S.C.E.



ROBERT K. LEON, B.S.  
"Bob"  
Civil Engineering  
Boys' High School.  
1931-32 Basketball, Baseball;  
1932-33 Basketball, Minor "C";  
1933-34 Basketball, Major "C".  
Numerals;  
1934-35 Cable Rep.  
A.S.M.E., C.U.A.A., Rifle Club

JOHN BYRON MAYER, B.S.  
"J. B."  
Civil Engineering  
Phi Sigma Omega.  
Stuyvesant High School.  
1933-34 Treas. A.S.C.E.;  
1934-35 Ch'rman A.S.C.E.,  
Vice-Pres. C.U.A.A.

JAMES H. MILNER, Jr., B.S.  
"Jim"  
Civil Engineering  
Stuyvesant High School.  
A.S.C.E.

EUGENE A. PETTERSEN, B.S.  
"Gene"  
Civil Engineering  
Cranford, N. J., High School.  
1931-32 Track.







**WILLIAM P. REUSS, B.S.**  
"Bill"

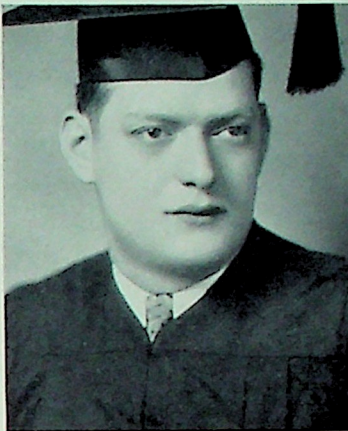
**Civil Engineering**

Phi Sigma Omega.  
Union Hill High School,  
Cooper Union School of Architecture.  
1930-31 Class Sec'y;  
1931-32 Class Treas.;  
1932-33 Class Pres., Ass't  
M'g'r. Track, Night Annual  
Com., Student Relations  
Com., Class Dinner Com.,  
Gold "C";  
1933-34 Editor-in-Chief Cable,  
Ch'r'man Ex Post Facto, Jr.  
Prom. Com., Silver "C";  
1934-35 Pres. Night Student  
Council, Pres. General Student  
Council.  
C.U.A.A., A.S.C.E.

**EMIL J. SARANIERO, B.S.**  
"Emil"

**Civil Engineering**

Plainfield High School.  
A.S.C.E.



**PHILIP RINGEL, B.S.**  
"Phil"

**Civil Engineering**

Seward Park High School.  
1930-31 Wrestling.  
A.S.C.E., C.U.A.A.

**ARTHUR STOLLE, B.S.**  
"Dud"

**Civil Engineering**

White Plains High School.  
Phi Sigma Omega.  
1934-35 Class Treas.  
A.S.C.E., C.U.A.A.



**JOHN P. ROULETT, Jr., B.S.**  
"Pat"

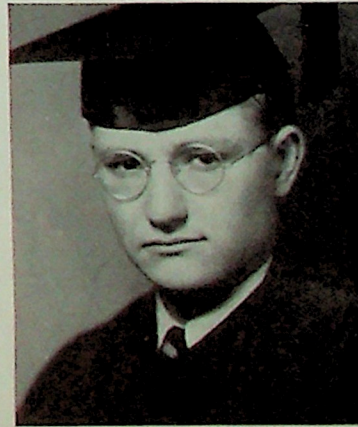
**Civil Engineering**

Manhattan "Prep"; Bryant  
High School.  
Phi Sigma Omega.  
1930-31 Varsity Basketball;  
1931-32 Varsity Basketball;  
1932-33 Varsity Basketball;  
Baseball;  
1933-34 Varsity Basketball;  
Treas. C.U.A.A.; Class Vice-  
Pres.; Junior Prom. Com.;  
Sports Editor Cable '34; Ex  
Post Facto; Gold "C";  
1934-35 Class Vice-Pres.

**MICHAEL WOLIN, B.S.**  
"Mike"

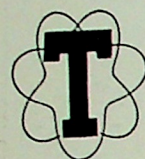
**Civil Engineering**

Jamaica Evening High School.  
1933-34 Basketball; Class  
Team.  
A.S.C.E., C.U.A.A.





## ELECTRICAL ENGINEERS



THE culmination of years at Cooper finds us looking back with pleasure to our freshman days. As to be expected, activities in the first year were slow in starting, but after our first final exams a class banquet held at the Greenwich Inn on East 11th Street did much toward breaking the ice, so to speak. Another banquet was held at the end of the second year at the Hotel Breslin. Both of these banquets were stag affairs.

The third year was one which will be well remembered by the class. During the year, several class get-togethers were held outside of school such as bowling and swimming parties. These were climaxed after exams by a Dinner-Dance of the combined third year classes. The affair was held at the Grill Room of the London Terrace and the music was supplied by the Blue Ridge Ramblers.

The Electrical Engineering class earned a reputation of being the most active in the school by its support of this Dinner-Dance as well as other school activities.

The fourth year was the Jubilee Cable year and our class was well represented by holding four of the more important positions on the Cable staff. In addition, the class was further distinguished by holding both the Chairmanship and Business Committee Chairmanship of the Junior Prom. The Prom was held at the Savoy Plaza, and was a most successful affair. By large the fourth year was the most active in the history of the class.

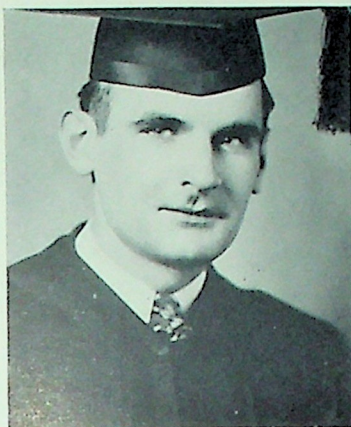
With the opening of the fifth year, the class looked forward hopefully toward that day in June when "with the help of God and understanding instructors" they become eligible to receive that small certificate that means so much.

Before parting, however, we wish to express our appreciation to the Faculty for the noble manner in which they overcame our ignorance.

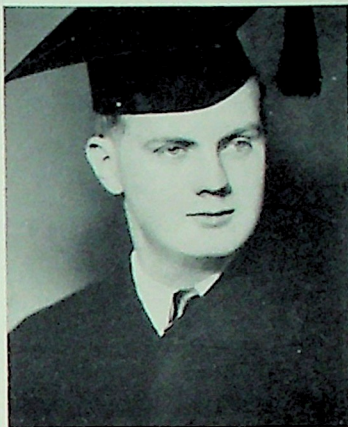
Class President.



# T H E \* C A B L E \* O F \* 1 9 3 5



**ROBERT J. BERGLER, B.S.**  
"Butch"  
Electrical Engineering  
Evander Childs High School.  
A.I.E.E.



**JAMES E. COFFEY, B.S.**  
"Jim"  
Electrical Engineering  
Brooklyn Technical High School.  
Phi Sigma Omega.  
1932-33 Class Sec.; Basketball;  
1933-34 Class Sec.; Basketball;  
Managing Editor of Cable.



**JOSEPH F. COSTA, B.S.**  
"Joe"  
Electrical Engineering  
New Utrecht High School.  
Omega Delta Phi.  
1931-32 Class Treas.;  
1932-33 Class Treas.; Sec.  
A.I.E.E.;  
1933-34 Sec. and Pres. A.I.E.E.;  
Class Vice-Pres.  
1934-35 Pres. A.I.E.E.; Class  
Vice-Pres.

**STURE O. EKSTRAND, B.S.**  
"Eck"  
Electrical Engineering  
Brooklyn Industrial High School.

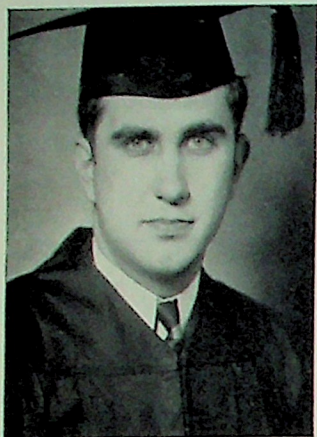
**HERBERT EDGAR  
FLEISCHER B. S.**  
"Hoib"  
Electrical Engineering  
Baltimore  
Polytechnic Institute  
A.I.E.E.

**HERMAN A. FOLGNER, B.S.**  
"Herman"  
Electrical Engineering  
Murray Hill Vocational High School.  
Omega Delta Phi.  
1931-32 Chairman Soph. Dance  
Comm. Inter-fraternity  
Council.  
1933-34 Cable Board: Chair-  
man Junior Prom, C.U.A.A.;  
A.I.E.E.





# T H E \* C A B L E \* O F \* 1 9 3 5



**HERMAN K. FRANKE, B.S.**  
Electrical Engineering  
Stuyvesant High School.  
Phi Sigma Omega.  
1932-33 Football;  
1933-34 Class Treas.; Copy  
Editor of Cable;  
1934-35 Class Treas.



**LOUIS H. GARTELMANN, B.S.**  
"Lou"  
Electrical Engineering  
James Monroe Evening High  
School.  
Phi Sigma Omega.  
A.I.E.E.  
1934-35 Class Pres., General  
Students Council.



**LEO GORIN, B.S.**  
Electrical Engineering  
Stuyvesant High School.  
A.I.E.E.

**WALTER E. GRUTZNER, B.S.**  
"Walt"  
Electrical Engineering  
Manual Training High School.



**WILLIAM S. HAYES, B.S.**  
"Bill"  
Electrical Engineering  
High School (Nova Scotia);  
Curtis Evening High School.  
A.I.E.E.

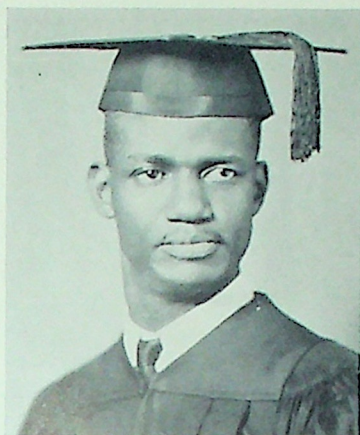


**FRED A. HERMAN, B.S.**  
Electrical Engineering  
Mount Vernon High School.  
A.I.E.E.





T H E \* C A B L E \* O F \* 1 9 3 5



REDVERS J. LAMPKIN, B.S.  
"Bertie"  
Electrical Engineering  
Collegiate; British Guiana;  
Harlem Evening High School.



E. M. LINDHEIMER, B.S.  
"Lindy"  
Electrical Engineering  
Hebrew Technical Institute.  
Alpha Mu Sigma.  
A.I.E.E.



LOUIS J. LONG, B.S.  
Electrical Engineering  
Grand Lake Stream High  
School; St. Johnsbury Acade-  
my.

JOHN J. V. McMAHON, B.S.  
"Jack"  
Electrical Engineering  
Morris High School.  
Newman Club, A.I.E.E.

OTTO OFFT, B.S.  
Electrical Engineering  
Husum, Germany.

IRVING M. PERLMAN, B.S.  
Electrical Engineering  
Morris High School.





# THE \* C A B L E \* O F \* 1 9 3 5



**WILLIAM G. SLACK, B.S.**  
 "Bill"  
 Electrical Engineering  
 Stuyvesant High School.  
 1933-34 Vice-Pres. A.I.E.E.;  
 Treas. A.I.E.E.  
 1934-35 Vice-Pres. A.I.E.E.



**HERMAN W. STRAUB, B.S.**  
 "Gob"  
 Electrical Engineering  
 Hackensack High School.



**NATHAN E. WALDO**  
 "Nat"  
 Electrical Engineering

**WILLIAM B. WEBB**  
 "Bill"

Electrical Engineering  
 George Washington Evening  
 High School.

**DONALD WILCOX, B.S.**  
 "Moe"

Electrical Engineering  
 Commerce High School.  
 1930-31 Class Treas.;  
 1932-33 Entertainment Comm.;  
 1933-34 Circulation Manager  
 of Cable.





## CHEMICAL ENGINEERS



AFTER five arduous years spent as students, the Chemical Engineering Class of 1935 finally blossoms forth as graduates, the product and result of the rigorous mental and technical training for which Cooper Union Engineering School is so famous. Each "Grad" must now go forward as an individual and show just what he can accomplish with the theoretical and material knowledge he has gained. Some may rise to great heights, others will meet with varying degrees of success, still others may drift to different fields of endeavor.

It would be of considerable interest if man could turn ahead the clock and then visualize what would occur five years from today. Let us, at present, leave this problem to our great theorists to solve and merely concern ourselves with the theoretical rapid advancement of time. We are now moving the clock and calendar five years ahead. Presto! Chango! Tempus Fugit!

### PROPHECY

It is now 1940. Let us look in upon the lives of each of the members of that Chemical Engineering Class of 1935. Quick, before the vision fades.

"HAL" ALBERT, now president of the Albert enterprises, promotes and sells everything from chemical preparations to physical phenomena. His technical training in Chemistry and executive training as editor of the "Pioneer" have proved to be invaluable.

MORRY KASHMAN is now known as the great philosopher chemist. His linking of these two sciences has brought fame to him. Tune him in on your televisior some evening.

"WALT" KUGEL is now in charge of "Great Eastern Air Conditioning, Inc." After graduating Cooper, he rose quickly to his present position. He thanks our Alma Mater for helping to bring out his latent ability.

KARL OLSEN has achieved the status of supervisor in the metallurgical department at Bell Labs. His discovery of a new non-corrosive metal has proved to be of great value.

FRANK SCHMETTLER is the co-discoverer of this. His fine skill and handling of this new product has earned him a nation-wide reputation.

"ART" SPIEGELMAN has become a super-salesman of chemicals and chemical equipment. His comprehension of chemical reactions has greatly aided him in putting over his sales.

EDWIN STOKEN has drifted from the field of Chemistry into grand opera. His splendid basso profundo has spread his fame as one of the great American singers.

"BILL" WEINTRAUB is now a chemist extra-ordinary. His discovery of new hormone stimulus to grow and revive falling hair has proved to be a boon to mankind and himself.

HARLEY SIEFF, that genial, self-composed, master of mathematical material, is now working on the exact application of mathematical determinations to general chemical reaction. His previous results have proved to be of economic importance to the industry.

The vision now fades and slowly disappears. Here we are back in the gray of the present. Has the vision been a feverish hallucination or really a suggestion of what will be? Only "Time", the great discloser, knows.

CLASS PRESIDENT.



THE \* C A B L E \* O F \* 1 9 3 5



HAROLD I. ALBERT, B.S.  
"Al"

Chemical Engineering

Pi Sigma.  
New Utrecht High School;  
C.C.N.Y.  
1932-33 Class Pres.;  
1933-34 Class Pres.; Vice-Pres.  
Eng. Students Council; Gold  
"C," Junior Prom Com.;  
Cable Board; Gold "C"  
Com.;



MORRY J. KASHMAN, B.S.  
"Kashie"

Chemical Engineering

Brooklyn Technical High  
School.  
Cable; Pioneer; Class Treas.



WALTER FRITZ KUGEL, B.S.  
"Curley"

Chemical Engineering

Hindenburg Oberrealschule,  
Germany.

KARL M. OLSEN, B.S.  
Chemical Engineering

Manual Training High School.  
1933-34 Class Vice-Pres.;  
1934-35 Class Vice-Pres.

FRANK J. SCHNETTLER, B.S.  
"Inch"

Chemical Engineering

Paterson Central High School.  
1934-35 Class Treas.

HARLEY B. SEIFF, B.S.  
"Harry"

Chemical Engineering

Boys' High School.  
1932-33 Class Vice-Pres.  
Pi Sigma.



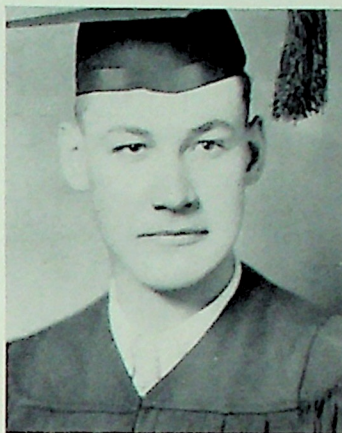


# T H E \* C A B L E \* O F \* 1 9 3 5



ARTHUR SPIEGELMAN, B.S.  
"Speedy"

Chemical Engineering  
Pi Sigma.  
Mamaioneck High School.  
1930-31 Class Treas.; Varsity  
Basketball;  
1932-33 Pioneer;  
1934-35 Pioneer.



EDWIN J. STOKIEN, B.S.  
"Stoke"

Chemical Engineering  
Jamaica High School; C.C.N.Y.  
Class Sec'y '31; Football Team.  
A.I.Ch.E.



WILLIAM WEINTRAUB, B.S.  
"Winey"

Chemical Engineering  
Boys' High School.





## SAYINGS AND PERSONALITIES

### FROM THE MATHEMATICS DEPARTMENT

"The hell you say!"

The man who seems to solve the most difficult differential equation as tho it were a mental problem.

He's a bug on recreational mathematics but is known by the boys as the best math teacher.

"Some day I'll fool you and ask for this homework."

"It falls apart."

"It's a good question. Look it up some time."

### FROM THE ELECTRICAL ENGINEERING DEPARTMENT

"Unlike poles do not attract.—They only tend to."

"The double line integral of the tangential component of the orthogonal projection of the flux density is equal to . . . !"

"And dear knows what!"

"Yea, sure, tell it to the marines."

The man who answers your question by asking another.

### FROM THE PHYSICS DEPARTMENT

"It's accurate to the micro-frogs hair of a percent."

"Get the scheme of that, fellas?"

"Thum-m-m-mb . . . m-m-m-motion!"

"You and who else are doing this report?"

"An engineer must never take a chance."

"Didn't we show you that in lecture?"

### FROM THE MECHANICAL ENGINEERING DEPARTMENT

"You'll get that in lab next year."

"I know it's pretty hard, fellows, but . . . !"

"It's just a ratio."

### FROM THE CIVIL ENGINEERING DEPARTMENT

"Umph, umph, umph, umph, umph, oomph!"

"O.K.—pass 'em over."

"Or John Doe?"

"Yes, sure, if you're certain the building is reasonably plumb."

### FROM THE CHEMICAL ENGINEERING DEPARTMENT

His stories reach the acme of class entertainment.

"Now let's see, where were we last time?"

"That's oot, that's oot! Eh!"

"I know how you fellows feel about it, I went thru it myself."

"Peculiarly enough . . . !"

"Professor Urey and I."

### FROM THE MACHINE DESIGN DEPARTMENT

The print came up in a hurry when the boys thought they would get an extra assignment.

"No engravings or trenches!"



# JUNIOR CLASSES

NIGHT SCHOOL  
OF  
ENGINEERING





**CHARLES S. BEGELMAN**

"Charlie"

**Mechanical Engineering**

Eastern District Evening High School

Alpha Mu Sigma

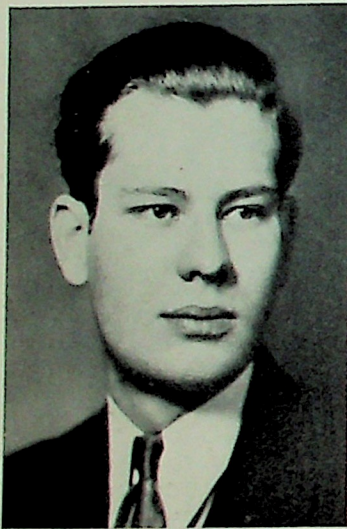
1931-32 Math Club

1932-33 Class President

1933-34 Junior Prom Com.

A.S.M.E.

"Charlie" is the chap who says little and thinks much. He is a straightforward fellow but in his honesty of expression, he is always considerate of the other fellow's feelings. He takes a thoughtful attitude toward extra-curricular activities and can always be depended upon to support a worthy cause. In short, "Charlie" is an honest friend, whose dreams, we hope, will ripen into reality.



**ANGELO BOTTA**

"Botts"

**Mechanical Engineering**

Stuyvesant High School

A.S.M.E.

"Botts" is one who takes his studies in a serious vein. When difficult problems confront the class, Angelo is among the first to have the solutions. He is a grand fellow to get along with and his sense of humor belies the note of seriousness we attribute to him. May both these combine to make his course through life in his chosen field a successful one.



**MILTON FINK**

"Finkie"

**Mechanical Engineering**

Morris High School

A.S.M.E.

"Finkie" who is small, is really mighty. He is one of the most valuable men in the M.E. Lab. because he reads gauges without bending over. Hydraulics never "Wiers" him out and he never becomes overheated in Thermo-Dynamics. The beaming engineer has a bright future.



**SALVATORE GANGI**

"Sal"

**Mechanical Engineering**  
Seward Park High School  
1934-35 Class Secretary  
A.S.M.E.

"Sal" says there are too many engineers for the profession to be properly appreciated. He aims to study law after graduation. He admits this field is overcrowded too, but claims that the combination of engineering and law will make him a patent attorney of which there are only 1,500 in the United States. Since post graduate work is necessary in any field, "Sal" prefers his scheme. Well, "Sal," we'll look you up when we perfect that idea we've been working on.



**ROBERT ERNEST GUNKEL**

"Bob"

**Mechanical Engineering**  
Collingswood High School, Collingswood, N. J.  
1931-32 Class Treasurer  
1934-35 Class Vice-President  
A.S.M.E.

"Bob" never takes for granted anything he reads in a text book without studying it to find out what it's all about. His main recreation, after his studies at Cooper, is sailing on Sheepshead Bay. We wish him good luck and hope he sails to success. At work he continues his association with water, being employed by a Fire Insurance Underwriting firm. We expect him to become one of the leading LIGHTS in the Fire Insurance business.



**STEPHEN G. HORESTA**

"Steve"

**Mechanical Engineering**  
Passaic High School  
1934-35 Class Treasurer  
A.S.M.E.

Here is one of those fortunate individuals who always seems to know where he is headed for and how to get there with the least ado—as witness his nightly scramble for the Jersey Meadows. We never did know much about him due to his retiring disposition, but we should like to bet that, when the last trumpet is sounded, "Steve" will be there just a little bit ahead of everyone else, and with all the answers ready.







**GEORGE B. KLIGFIELD**  
"Kliggie"

**Mechanical Engineering**

New Haven Hillhouse High School  
1933-34 Class Treasurer  
1934-35 Business Manager of Cable  
A.S.M.E.

The Budget is balanced; no more sighing. From high and low the puns went flying.

"Kliggie" takes keen pride in the fact that he can and does have a pun for every occasion. But in spite of this the boys still seem to like his company, and he can always be found among them discussing streamlined subways equipped with resilient wheels, "Yowsa" our George is going to introduce meliorations that will revolutionize the railway industry.



**WERNER LINDHEIMER**  
"Lindy"

**Mechanical Engineering**

Eastern District Evening High School  
Alpha Mu Sigma  
A.S.M.E.

"Lindy," is one of the many fellows who stays up at night to solve a problem. By virtue of his jovial disposition and sense of humor, he always helps to brighten up any social gathering in which he may take part. No wonder he is admired by everyone in his class. One of his ambitions is never to miss a class.



**LEO B. LUCKNER**  
"Count"

**Mechanical Engineering**

Newtown High School  
A.S.M.E.

The "Count" is one of those quiet, modest and unassuming souls. But don't be deceived. He has a certain definite assurance about himself that causes others to put responsibility upon his shoulders, confident that the job will be done well. We wish him the best of luck and look to see him assume more of the responsibilities of his chosen field.



**JOHN A. ROBERTS**

"Jack"

**Mechanical Engineering**

De Witt Clinton High School

Omega Delta Phi

A.S.M.E.

A good-looking likeable young fellow, who never says much, but thinks a lot. Jack can practically always be found in the study room deeply engrossed in a textbook or a magazine. In spite of this studious nature he is a regular fellow who can hold up his end of any general discussion.



**JAMES ROSEN**

"Jim"

**Mechanical Engineering**

Seward High School

A.S.M.E.

"Jim" likes to walk, preferably along the Bronx River to Kensico Dam. Says there is nothing as restful as a hike of 20 miles. His other hobby is to discover why a tin can leaks, when it does. If he continues his hard work and from what we know of his scholastic and fraternal abilities, he is bound to be among the elite in the Mechanical Engineering field.



**GEORGE CHARLES SCHAAF**

"Schaffy"

**Mechanical Engineering**

Brooklyn Technical High School

George and Hydraulics, they seem to flow together. The energy and industry that he exhibits in connection with his studies has always been admired by his fellow students. We are glad to count him as our friend, and wish him luck and happiness.







**HERBERT SCHARF**

"Herbie"

**Mechanical Engineering**

New Lots High School; C. C. N. Y.

A.S.M.E.

This pioneer in the refrigeration line claims to be the only man alive who can keep his car running in sub-zero weather with only aqua-pura in his radiator. If he can apply such astonishing principles to his field of Mechanical Engineering his reputation in future years is assured.



**SOL H. SILVERMAN**

"Silvy"

**Mechanical Engineering**

Thomas Jefferson High School; C.C.N.Y.

Phi Lambda Sigma

A.S.M.E.

Here is one of those students who should get two diplomas. One for his own graduation and one for all the time he spends lending a hand to fellow students, even if the task is a long one. It's good to have men like him in the class.



**ISRAEL SVERDLIK**

"Sverdy"

**Mechanical Engineering**

Jamaica High School

A.S.M.E.

1934-35 Pioneer Reporter

While his name signifies a wielder of the scythe, he has decided to forego the soil for Mechanical Engineering. He is at present cooling his heels nursing domestic refrigerators. Nevertheless he has a warm regard for all his fellow students, which is reciprocated. Good luck and may your cycle through life be efficient.



**HAROLD TUCKER**

"Hal"

**Mechanical Engineering**

Boys' High School

"Hal" was really named Harvey, but he chose Harold for short. Anything that is intricate interests him. (Anything except a tough Hydraulics problem.) Yachting and football are his main diversions, and at present he is busy building a "Star Class" boat. He is one of the few men who already have their vacations planned, figuring on taking several trips on his "Schooner."



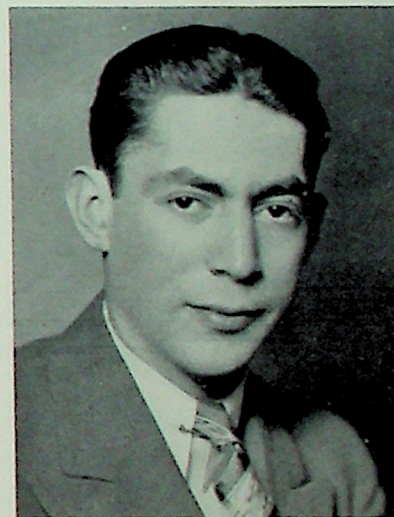
**NATHAN URICK**

"Nat"

**Mechanical Engineering**

Stuyvesant High School

When and how "Nat" gets his work done is a mystery to us—but that he does is shown by the fact that he is still with us at Cooper. All of which goes to show that there is much to be said for him, but we will cut it short by saying: In the days to come, after Cooper has given him all that it can in Mechanical Engineering, we feel sure "Nat" will be one of those men who make the wheels go round.



**MAX YESOWITZ**

"Mac"

**Mechanical Engineering**

Brooklyn Technical High School; Drake University

1932-33 Class Vice-President

1933-34 Class Vice-President

1934-35 Class President; Secretary A.S.M.E.;

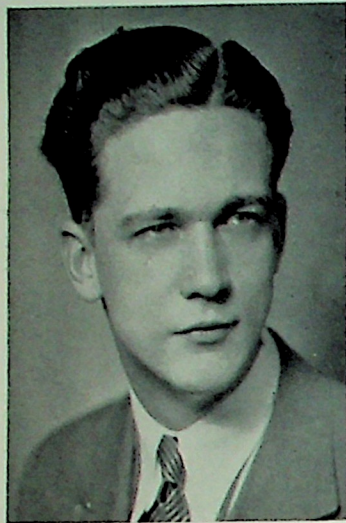
Circulation Manager Cable;

Night Engineering Council

Floating power has nothing on "Mac." He can take vibrations out of false teeth, at least he thinks so. His ambition is to be responsible for the floating of any and all machinery on some type of isolating medium. He has some "corking" good ideas and is always ready to spring them on some one with a willing ear. Should you feel any tremors coming on, consult our vibration engineer. His enthusiasm cannot be dampened.







**EDWARD J. BLASS**

"Ed."

**Civil Engineering**

St. Leonard's Academy

Slow and methodical, but do not let the two descriptive words mislead you into drastic error. He's from Missouri as the words go and demands proven facts concerning any particular thing.



**LESLIE W. BOLLMAN**

"Les"

**Civil Engineering**

Mechanics Institute

1933-34 Class Secretary

1934-35 Class Vice President

A.S.C.E.

"Les" is one of the more fortunate fellows whose class work is backed by several years' experience in the field. His work has already merited him a junior membership in the American Society of Civil Engineers and has enabled him to convert pure theory into more tangible terms. His practical way of thinking is topped only by his genial personality, keen wit, and the ability to have the correct answer or a good alibi always on hand. His leaving Cooper will be our loss and the engineering world's gain. Good luck "Les," will see you on top.



**STEN ANDERS CASPERSSON**

"Caspy"

**Civil Engineering**

Erasmus Hall High School; High School, Sweden

A regular night owl this chap is. He has attended night school since he came from Sweden in 1927. His interest in traveling is paralleled only by his experience.



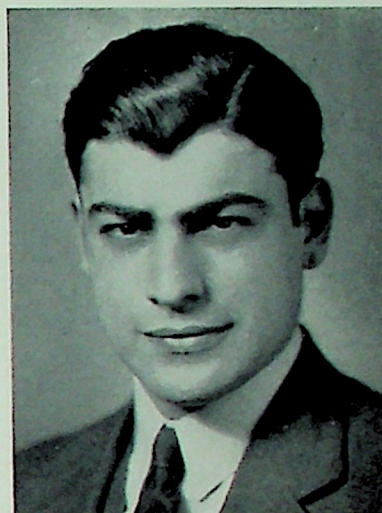
**HYMAN I. COHEN**

"Hy"

**Civil Engineering**

Stuyvesant High School; City College, N. Y.

There's more pep and muscle in Hy than those eye-glasses which he wears in class, would indicate. When a problem confronts this fellow, there's no heming and hawing, he just sails into it. He goes about his work quietly and effectively. He always has a cheerful and illuminating explanation forthcoming when someone requests information. He's a practical man.



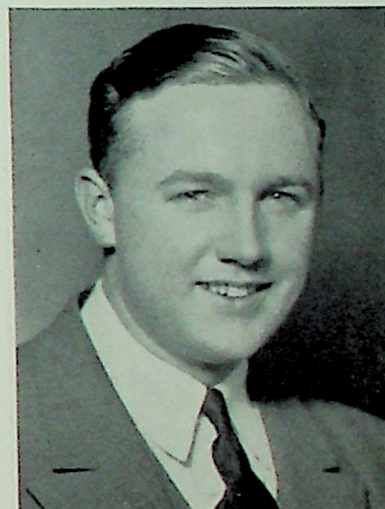
**LAWRENCE B. COONAN**

"Larry"

**Civil Engineering**

Pratt Institute  
1931-32 Class Representative

Fair of hair and complexion, tall and well built, a man who combines a splendid appearance with a charming personality. "Larry" is one of the truly fine students in our class. Not content with just passing the various courses, he aims for the highest grades. There is no doubt that his ambitions towards the advancement of engineering will result in his recognition as a foremost engineer.



**LEOPOLD EICHENBAUM**

**Civil Engineering**

Boys' High School

1933-34 Class Pres.; General Students Council; Night Engineering Students Council; Basketball; 1934-35 Class Treas.; Pioneer Board of Management; Basketball.

"Ike" evidently comes from Missouri as his favorite statement is "I won't believe it until it is proven to me." Happy go lucky to the extreme, he nevertheless goes to all his classes with the feeling, "Well, Heat & Thermo is just another feed for me, and Hydraulics just another drink." It's a sure bet that every class member wishes that he had "Ike's" undisturbed disposition.







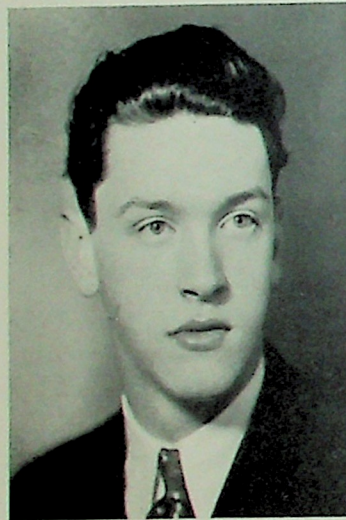
**JOSEPH FAMOSO**

"Joe"

**Civil Engineering**

New Utrecht High School; Pratt Institute

A great talker is Joe, but not belittling his great articulatory powers, he is one of those few students who can think hydraulically, mechanically and thermodynamically simultaneously, without consternation. No problem is too big for Joe. All tasks that he tackles just break up into their component parts without any apparent effort on his part. A future engineer no doubt, but he would make a better District Attorney.



**WILLIAM JOSEPH GIBBONS**

"Bill"

**Civil Engineering**

Brooklyn Technical High School

Bill is a retiring sort of a chap who absorbs his book learning with great gusto. His demeanor bespeaks of a man who has seen and heard much and as such, considers that what he may say will be inconsequential. May his philosophy on Life carry him far in Engineering.



**SAMUEL GINESIN**

**Civil Engineering**

F. K. Lane High School

A.S.C.E.

He took up Civil Engineering to see the world. Expects to go to China, Africa, Alaska, Mexico, India, Oshkosh and all points west, but will probably end up working for the City of New York.



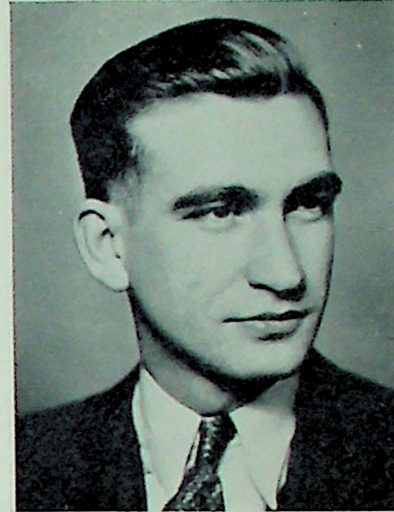
**ALBERT HERDMAN**

"Al"

**Civil Engineering**

Woodrow Wilson High School, Weehawken, N. J.  
1934-35 Advertising Manager Cable;  
Secretary of Class  
A.S.C.E.

Too bad he was christened Al. He is the "Johnny on the spot" in this class. No job is too big for him. Al expects to cover South America with bridges, roads, and what-nots. Only good can be said of "Al."



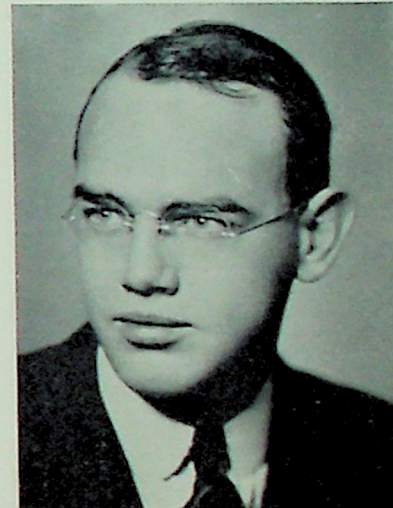
**LEWIS A. HORNBY**

"Hick"

**Civil Engineering**

Dickinson High School

His forte is his painstaking care in the solution of any problem. Exercising patience and understanding in the handling of his work, his field of endeavor is clearly Research Development. His foible is a modest nature that prevents his true understanding of the value of his accomplishments.



**ARTHUR KAHLENBERG**

"Little Artie"

**Civil Engineering**

James Madison High School; C.C.N.Y.; Marcy Tech.  
Alpha Mu Sigma

Arty is one of those few members of his class who really has a great personality, fine ability and a true engineering understanding. These three characteristics being the basic qualifications for a successful engineer, it is not difficult to foresee "Arty" as a topnotcher.







**PAUL C. KRUEGER**

"Paul"

**Civil Engineering**

Stuyvesant High School

A.S.C.E.

An industrious student, a helpful mate, an honorable father—such is the common concept of the class for this student. His name will some day be blazed in glory throughout the engineering world. "Best of Luck Paul."



**ARTHUR D. LANDIN**

"Artie"

**Civil Engineering**

Stuyvesant High School; C. C., N. Y.

A.S.C.E.

Artie is trying to follow the footsteps of his brother by becoming an engineer; but not in the same field. Sometimes he wonders how he ever reached as far as he has, but if perseverance is the stepping stone to success "Artie" should go places and do things," as he hopes to.



**DAVID S. LINSKY**

**Civil Engineering**

Morris High School

Born in Brighton, Massachusetts, December 25, 1907—.



**JOHN JOSEPH McNERNEY**

"Mac"

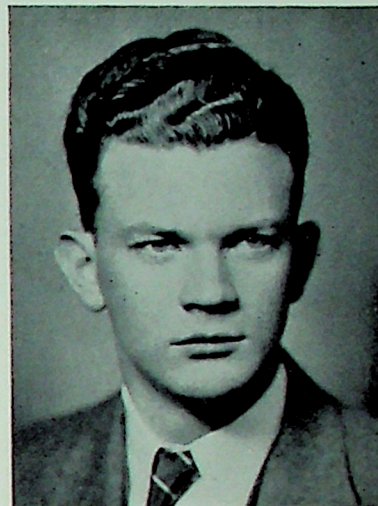
**Civil Engineering**

Regis High School

Omega Delta Phi

1931-32-33 Pioneer; 1934-35 Class Secretary; Newman  
Club; A.S.C.E.

Four years of association with "Mac" have given his classmates an opportunity to know the genial personality which his quiet manner partly conceals. In an unassuming way, "Mac" has been active in his class organizations, revealing himself to be a tireless and efficient worker. In addition to a keen mind he is the possessor of that rare combination of a sense of humor and an unerring instinct of propriety. His classmates expect great things of him.



**LEON PASSEL**

"Slim"

**Civil Engineering**

Morris High School

A.S.C.E.

"Slim" is continuing the traditions of the Passel family by being the fourth in his family to enter good old Cooper Union. From present indications it looks as though "Slim" will bring great credit to Cooper and the engineering profession by following through to success with that Passel spirit.



**WILLIAM V. PELLEGRINI**

"Bill"

**Civil Engineering**

Stuyvesant High School

Phi Sigma Omega

A.S.C.E., C.U.A.A.

Civil engineering by vocation, radio by avocation and a natural aptitude for Heat and Thermodynamics is the foundation on which "Bill" is building his future. We can understand the first two, but it seems strange for one as cold as "Bill" to give pointers on "Heat."







**MARTIN RIVETZ**

"Marty"

**Civil Engineering**

Franklin K. Lane High School  
A.S.C.E.

Don't let the name fool you. "Marty" thought he knew all about rivets until he met Mr. Van Buren. Notwithstanding this fact, he is the type of fellow who will stick to a job until it is finished, regardless of the obstacles. He is persistent to the point of being obstinate, but he always gets the desired results.



**JOSEPH RUCHMAN**

**Civil Engineering**

Stuyvesant High School; New York University,  
C. C., N. Y.

Joe is one of those few who can always be depended upon to pass the finals regardless of the term's work. The type that likes to prove a formula before applying it in the solution of a problem. If his present methods continue after graduation, he will be one of our future great engineers.



**FRANK J. SCHMIDT**

"Smitty"

**Civil Engineering**

Brooklyn Technical High School  
Pioneer; A.S.C.E.

With orifice and weir and eight point-o-two  
We greet you Hydraulics, how-do-you-do.  
A tough subject, eh? Well, here is the trick,  
The formula, the set-up, a slip of the stick,  
Moments of inertia mean but one thing,  
It's Mechanics, my lads. Death where is thy sting?  
Fear not his prowess, he's harmless (Oh, yeah?)  
He'll stress you and strain you and get in your hair,  
Travers, stadia, transit, and level.  
Perchance Surveying does not give you trouble?  
Advise, however, he cannot for fear  
His forty induces a minus cheer.



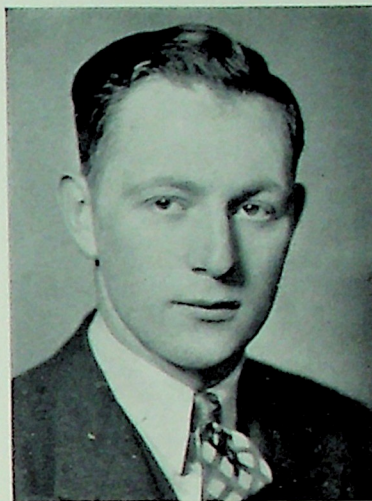
**ALEXANDER L. SEGALMAN**

"Axel"

**Civil Engineering**

1934-35 Class President; Junior Prom. Com.; Annual Com.; Treas. Night Student Council  
A.S.C.E.

"Axel" will always be remembered by the members of this class for his loyalty to Cooper Union and his support of the Night School extra-curricular activities. Besides being a good all around student, he is always willing to discuss mathematics with anyone who wants to be enlightened on the subject. We are sure he will be a credit to our class in his future career.



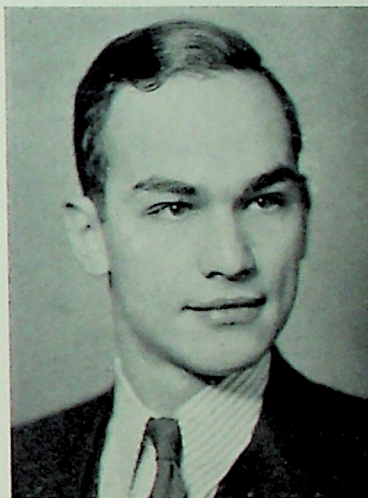
**LEONARD SIEGEL**

"Len"

**Civil Engineering**

Lincoln High School  
1931-32 Secretary Class

A swell fellow from across the river. He will always be found in closest cooperation with all, regardless of his own inconvenience. Knows all the latest cracks and can he spill them. Whew!



**ADOLPH B. STERN**

**Civil Engineering**

Math Society

Adolph, the gentleman, the scholar, the philanthropist and the humorist, is, if I may add also a pretty good guy on occasion for sportsmanship.







**JOHN KAREL SUNDERMEYER**

"Charlie"

**Civil Engineering**

Central High School, Paterson, New Jersey

"Charlie" is a regular fellow. Although he lives way out in the wilds of Jersey, he's always willing to take a chance on missing his train to help out a friend. As for scholarship—well—any fellow who can draw three A's out of four needs no recommendation.



**FRANK A. TRACEY**

**Civil Engineering**

St. Peter's Prep.

Phi Sigma Omega

1933-34 Business Manager Cable; Junior Prom Comm.; Gold "C"; Ex Post Facto; 1934-35 Chairman Junior Prom Comm.; A.S.C.E.

Frank is one of our married men, and his present ambition is to graduate before his sons can call him "schoolmate". His boundless energy has led him to take part in a great many extra-curricular activities, and their resultant success speaks for his ability. His host of friends are looking forward to great things for him.



**JOHN F. WESTMAN**

"John"

**Civil Engineering**

Haaren High School

1934-35 Chairman Business Committee, Junior Prom. A.S.C.E.

Tall, dark and handsome, John is the ideal student. Studies without being a boresome grind, a pleasing talker without being garrulous, an enthusiast without being a pest about his activities. "Wes'" enthusiasm was best illustrated by his work on the Junior Prom Committee. His pep and inspiring actions contributed materially to its success.



**HERBERT ADLER**  
Electrical Engineering

Herbert will long be remembered by his class-mates as the propounder of high-powered scientific formulae. In class he is a mathematical athlete who tries to take all engineering hurdles in one stride. His faith in his easy command of the King's English and things scientific should make his a fine career.



**MICHAEL ARUCK**  
"Mike"

Electrical Engineering

Phi Sigma Omega  
Crosby High School, Waterbury, Connecticut  
1931-32 Football; Track  
1932-33 Football; Track  
1933-34 Treasurer A.A.

Football is one of the many sports in which "Mike" has indulged here at Cooper. Believe it or not, but Mike was the one that broke the jinx of ours by scoring a touch-down after the team had gone scoreless for a number of years. He is serious, enduring, and energetic. "Mike" manages to get along well in his studies and still finds time to participate in athletics. Being a good student, he should make a touch-down in the engineering world.



**STANLEY EDWARD BERG**  
"Stan"

Electrical Engineering

Phi Sigma Omega  
American Institute of Banking; Thomas Jefferson  
High School  
A. I. E. E.

Association with "Stan" thru the years of school has made the job an easier one for many; always near the top and readily willing to help. To write anything representative of him could never compensate for the value of his friendship. His character has been moulded by his associations with the technicalities of Engineering, Importing, and the details of Finance and Banking, bringing it to a degree of perfection only excelled by his personality. Impregnated with knowledge so derived and those virtues so desirable to success, he should rise to the top in the profession of his choice.







**JAMES J. BURKE**

"Jim"

**Electrical Engineering**

Phi Sigma Omega  
St. Johns University

Quiet, but with a twinkle in his eye not always perceptible behind those scholarly spectacles, he welcomes a "bit of an argument" as an opportunity to display his familiarity with Noah Webster's masterpiece. He has built up a reputation as a phrase coiner, a living refutation of the popular notion that engineers cannot express themselves adequately. He combines his facility at handling the mother tongue with a geniality which makes "Jim" a good fellow and staunch friend.



**ADAM SCOTT CALLAN**

"Scottie"

**Electrical Engineering**

Phi Sigma Omega  
Amherst High School, Ohio  
A.I.E.E.

He doesn't seem to be very happy up there but the fact is that Lady Luck seems to give some boys a sweeter smile than she gives the rest. Adam, being a rather successful engineer, is only waiting for the day when he marches up to the altar and hears her say "I do."



**VICTOR M. CATALDO**

"Vic"

**Electrical Engineering**

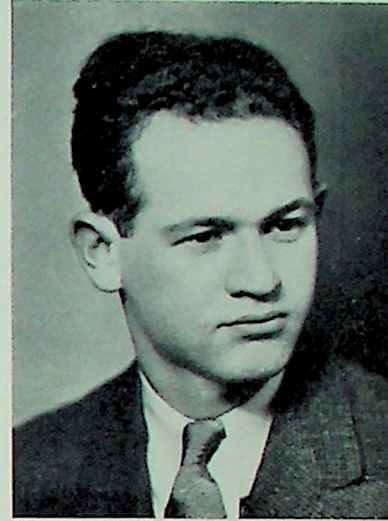
Guayama High School, Puerto Rico  
A.I.E.E.

"Vic" is a humorous chap who takes pride in his work, but always manages to take "time-out" during lab sessions for a smoke. When Cooper Union has given him his degree, he hopes to practice engineering in the foreign fields. His favorite subject is Math, and his pet peeve is Drawing.



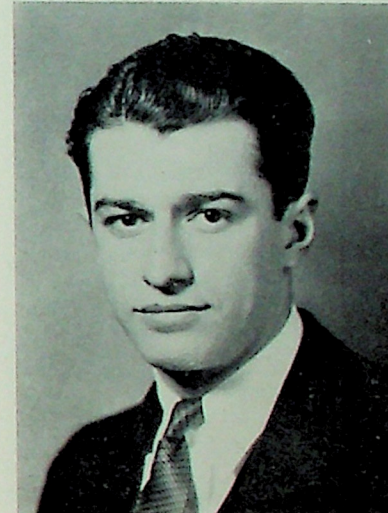
**IRWIN M. COLEMAN**  
**Electrical Engineering**  
 Townsend Harris Hall High  
 A.I.E.E.

Here's a fellow who, although he has studied Electrical Engineering successfully for four years, still has been able to retain a sense of humor. His schedule is seven months of work and school and five months of week-ends canoeing and sailing. He is a good scholar, having an analytical mind. His ambition is to become a research engineer.



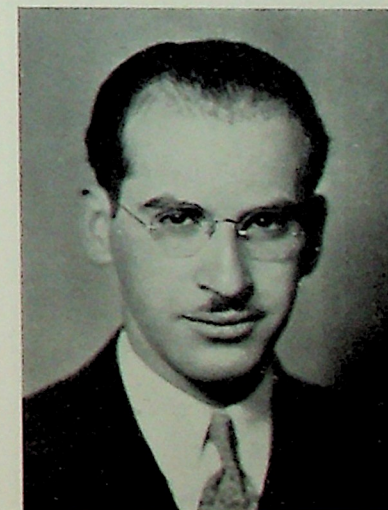
**HERCULES CUTTICA**  
 "Harry"  
**Electrical Engineering**  
 Stuyvesant High School

"Harry" is one of our best-natured associates. We have yet to find him without his usual good temper and humor. Yet his first name, Hercules, is not merely a name, for he is an amateur boxer of no mean ability. Among his athletic activities, soccer holds a leading place. We believe Harry will make many goals in life, outside of soccer.

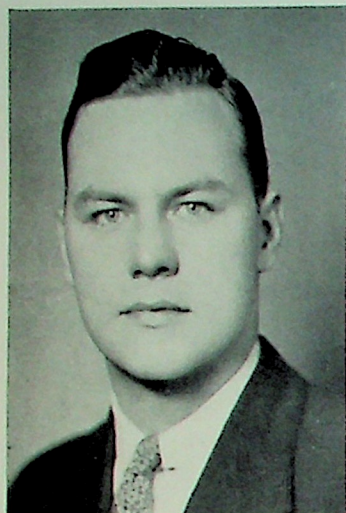


**IRWIN DLUGATCH**  
 "Dlug"  
**Electrical Engineering**  
 Boys' High School  
 1934-35 Managing Editor Cable

It is through the efforts of this likeable chap that the material for the theme of this volume was compiled. With all the references that he consulted and all the data that he had to digest it is quite safe to say that he is a walking encyclopedia.







**RAYMOND B. DUGUID**

"Ray"

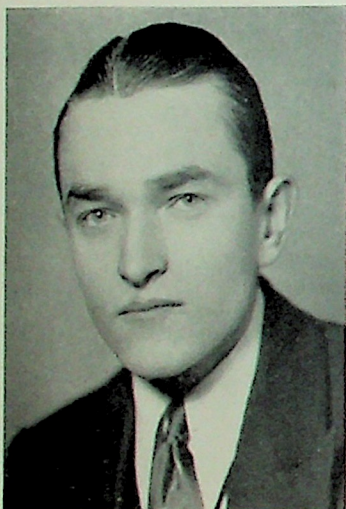
**Electrical Engineering**

Phi Sigma Omega

Manual Training High School; Erasmus Hall High School

1931-32 Hand-Ball Team

When you meet Ray, you remember him. The pleasant combination of bonhomie, dignified good appearance, and that intangible manifestation of a sterling character cannot fail to impress. His outstanding characteristics are: a logical self-control that never allows impetuous action; a self-assurance that makes the most of a solid grounding. Ray is one of the class' much too eligible bachelors. As his personality, intelligence and ability to handle his fellow-men mark him as headed for the top, we can only wish him a happy journey on the way.



**OSCAR M. GADEMANN**

"Os"

**Electrical Engineering**

Brooklyn Technical High School

"Os" shows real engineering ability having acquired a good technical grounding in high school. He goes to school realizing that he will get out only as much as he puts in. He is not known much outside of class as his diligence in his studies requires every last moment of his time.



**JAMES J. GILL**

"Jim"

**Electrical Engineering**

Phi Sigma Omega

1931-32 Class Vice-President

1932-33 Class Vice-President

1933-34 Class President

1934-35 Class President; Assistant Business Manager Cable; Night Engineering Student Council; General Student Council; Night Annual Committee.

"Jim's" happy faculty for planning fully before acting allows him to function at maximum efficiency with minimum effort. His class record is indicative of this. The many extra-curricular activities which somehow he has found time to take part in, have made him liked by members of other classes as well as his own. He is greatly respected for his ability to do things in a proper manner and for his genial good nature.



**MILTON GOLDBERG**

"Goldy"

**Electrical Engineering**

Thomas Jefferson High School, Elizabeth, N. J.  
Electrical Engineering is his chosen profession, but to his neighbors in the drawing classes he is known as a "demon draftsman." His sense of humor is so subtle that it is only a choice few who really get the gist of his brain storms.



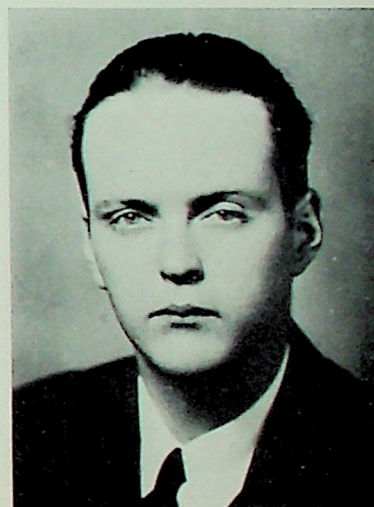
**CHARLES E. GORMAN**

"Charlie"

**Electrical Engineering**

Omega Delta Phi  
Flushing High School  
1934-35 Treasurer A.I.E.E.

Cooper Union first greeted Charlie as a Tech student. Soon after, he entered the A. T. and T. as a linesman and Cooper Union Night School as a prospective Electrical Engineer. Cartooning is his hobby and boating his weakness.



**RAYMOND K. KILMER**

"Ray"

**Electrical Engineering**

Phi Sigma Omega  
Jamaica High School; Washington Irving Evening High School  
1933-34 Class Vice-President; Night Annual Committee; 1934-35 Junior Prom Committee  
A.I.E.E.

A quiet, congenial fellow who has the rare gift of naturalness and who is known to all of us as a regular fellow. More Power to you, Ray.







**GEORGE M. KOVACSEVICS**

**Electrical Engineering**

Omega Delta Phi  
Valley Stream Central High School  
1931-32 Track, 1932-33 Track, 1933-34 Football; Wrestling; 1934-35 Cable Photo Editor

Athletics are this young fellow's weakness, and the Sciences his forte. He can usually be found in the frat rooms, solving "Diffs" and "E.E." problems till all hours of the night. He has also undertaken the job of "Cable Photo Editor" and has done a very excellent job as you may judge.



**LEO KUGLER**

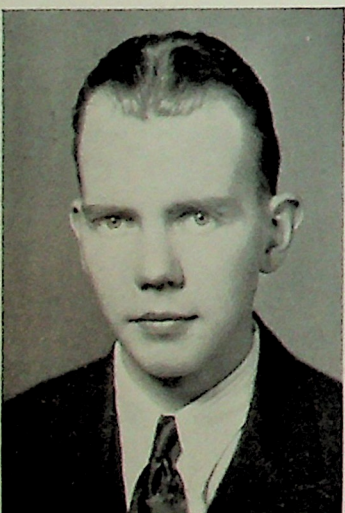
"Leo"

**Electrical Engineering**

Boy's High School; Memorial High School, West New York, N. J.

A.I.E.E.

One of Leo's outstanding characteristics is his fine business ability. This combined with frankness, sincerity, and other fine qualities will without doubt aid him in attaining a well defined position in the career he has chosen to follow.



**ARTHUR J. LANDSVERK**

"Landy"

**Electrical Engineering**

Sigma Alpha Pi  
Memorial High School, West New York, N. J.  
1934-35 Secretary A.I.E.E.

"Landy," the mutual friend of every fellow in the class, has formed one of those "Mutt and Jeff" friendships with "Kugie" Kugler. The fact that "Kugie" brings his car to school has nothing to do with it, because only "Land" has sufficient courage to ride with him more than once. If the wishes of every man in the class come true, "Landy" will live a life of luxury and good fortune.



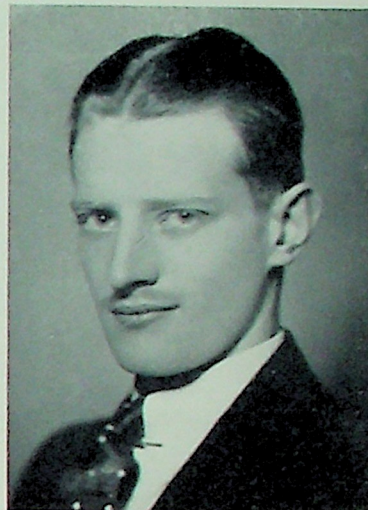
**LEONARD RICHARD LUKANITSCH**

"Luke"

**Electrical Engineering**

De Witt Clinton High School

An athlete, a scholar, an actor, and a gentleman, if there ever was one. He is a true, faithful, and "ready" friend. During his scholastic career, he has had the distinction of winning two scholarships. He was the favorite winning pitcher on one of the lesser-known amateur baseball teams, and was also an actor in many well-known plays. He is very modest and refuses to boast about his accomplishments, save one, which, by many is considered to be his one weakness. It is the fact that no one girl has, as yet, managed to seriously impress him. In his spare moments, which are very scarce, he may be found practicing on either his violin or guitar.



**IRVING A. MAGER**

**Electrical Engineering**

Evander Childs High School

A.I.E.E.

Mager is another of the class "Sphinxes," who never says much but thinks plenty. Radio is his profession and hobby, and he is always devising new and trick circuits. Ask him about his latest short wave set. He recently married a beautiful southern girl and is seen even less around school after or before classes.



**DAVID L. MATSON, JR.**

"Dave"

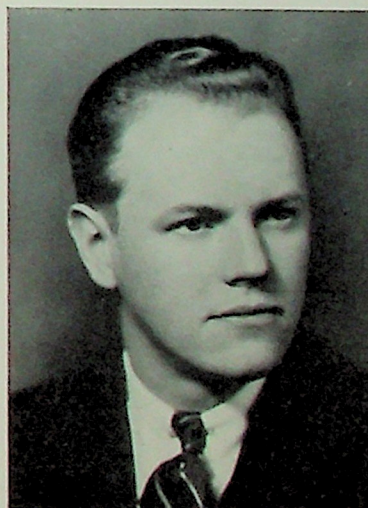
**Electrical Engineering**

Mechanics Institute; Brooklyn Technical High School

1933-34 Class Secretary

1934-35 Class Vice-President

Dave is one of the most brilliant students in the entire class, one who does not accept any statement without first completely analyzing every phase of the subject. Quiet and unassuming, he has acquired the friendship and respect of everyone with whom he has come in contact. With the traits and qualifications he has so ably demonstrated in Cooper, we may expect to see him a great success in his chosen profession.







**ALFRED J. MUNN**

"Al"

**Electrical Engineering**

West New York High School; Washington Irving High School

1931-32 Class President

1932-33 Class President

1933-34 Class Treasurer

1934-35 Class Treasurer

"Al" is one of the most liked and best known fellows in Cooper. Beginning by being elected class president in the first year, he has worked for the class each year since. His admirable work, as the Class Coordinator and "Spiriter" as well as his cheery good manner, should go a long way in making him "one of the mighty" in later years.



**JOSEPH A. NORMANN**

"Joe"

**Electrical Engineering**

Brooklyn Technical High School  
A.I.E.E.

Joe and his frank good-natured smile always seem to go together. He is a promising young engineer who bids high to become one of the Bell System's best men. He is always willing to cooperate, and help out a fellow student in his hour of need, a virtue which we all know is a stepping stone to success in any man's country. He is a man who can be relied upon to have that ticklish problem all worked out, and have it done correctly, which is something aspired to by many and attained by few.



**ELLIOTT F. OAKWOOD**

"Oak"

**Electrical Engineering**

Brooklyn Technical High School  
Rugby Prep.

Some men, on leaving Cooper Union, proceed to other schools for post-graduate work. Elliott is such a man. He plans to attend Columbia for further study in power generation and transmission. His favorite study at Cooper has been Analytical Geometry. When he finds some spare time, he can be found in some sand-lot near home showing the neighborhood how to play base-ball.



**ILDEFONSO G. ORELLANA**

"Al"

**Electrical Engineering**

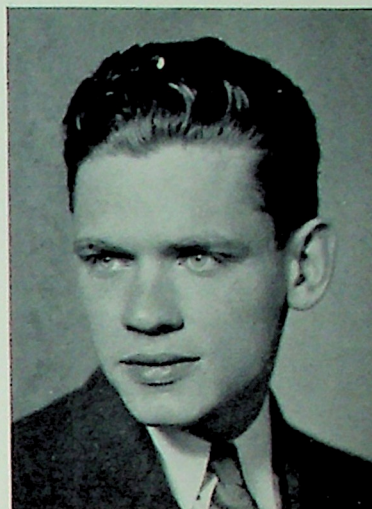
Omega Delta Phi

American High School, Mexico City; Newtown High School

1934-35 Copy Editor "Cable"

Newman Club, C.U.A.A.

Al is the blue-eyed boy who knows those wild stories about the hot chile-con-carne and tequila they serve down his way. According to averages, he should have an equally hot temper, but we don't believe any of his class-mates has ever seen this rise more than two degrees above ambient temperatures. Noteworthy of Al's character is his systematic neatness about his notes and books. This has proven a great boon to him already, as may be seen by the excellent work he has done as Copy Editor of this "Cable."



**IRVING PERLMAN**

"Irv"

**Electrical Engineering**

Hebrew Technical Institute

It is a known fact that all things come to the man who waits. "Irv" got a mustache in his early twenties. This is friverless, but "Irv" is not and undoubtedly has an assured future.



**ABRAHAM J. RICH**

"Abe"

**Electrical Engineering**

Franklin K. Lane High School

Though a mild-mannered and quiet chap, "Abe" is steadily advancing to the desired goal of all; a Cooper Union degree. In spite of the time which he dedicates to studying and working as an electrician in and about New York, he finds it possible to operate radio station W2AKN, his own personal property. Tune in some time!







**ROBERT PATRICK SCANLON**

"Bob"

**Electrical Engineering**

Regis High School

A.I.E.E., Newman Club

"Bob", alias "Sonny", perhaps because of his disposition, has become very well acquainted with Morpheus, in fact has often been mistaken for that somnolent gentleman. He professes that his hobbies are sleeping and eating, and it is our sincere hope that he never finds himself too sleepy to eat and too hungry to sleep.



**HARRY SHAFIROFF**

"Shaf"

**Electrical Engineering**

James Madison High School, Brooklyn

Possessing all the necessary qualities, such as initiative and self-confidence, Harry is one of our promising engineers. Harry takes his studies seriously, despite his amorous leaning, and he may be seen any night wandering thoughtfully along Third Avenue. Lest he become too proud, we might add here, that it is a Cooper Union custom to come to class with the necessary utensils.



**T. EDWARD THORSEN**

"Eddie"

**Electrical Engineering**

Omega Delta Phi

Brooklyn Technical High School

1932-33 Class Treasurer

1934-35 Junior Prom Committee

Sports Editor of "Cable"

C.U.A.A.

Eddie in some characteristics is built like a shunt motor. He uses some of his potential energy to predetermine his abilities, and once he has set out on a job, he automatically regulates for unfailing results. It is not everything he will tackle, but having started something he goes thru the thick-of-it at the same rate he would handle more minor duties. This, plus Eddie's easily likeable disposition makes him an all around good fellow headed straight for sure success, wherever he may find himself.



**JACK E. VELLEMAN**

"Jack"

**Electrical Engineering**

Malden High School, Malden, Mass.

Jack is a fellow about whom many complimentary things can be said; a fellow who is always willing to lend a helping hand to the next chap. But this may be due to the feminine influence because Jack is courting a lovely damsel (he said so himself). His present ambition is to follow in his brother's footsteps, and graduate from Cooper. Though he does not talk much in class, Jack always comes thru when the occasion arises.

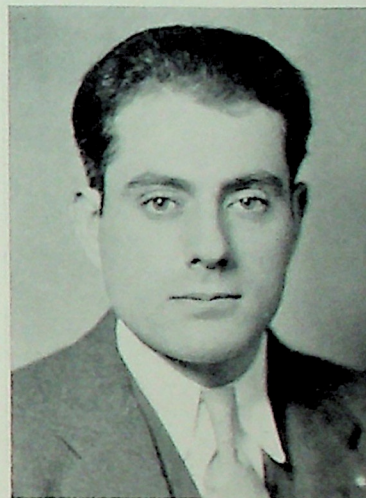


**PASQUALE H. VISCO**

"Pat"

**Electrical Engineering**

A city-bred lad with agricultural ideas: a man who thinks with his own head and works out his own problems his own way. Combine this with a huge physique, a pair of smiling eyes, a shock of jet black hair, add a dash of good humor and congeniality, a hearty laugh, a spirit of real friendship and you have a picture of Pat.



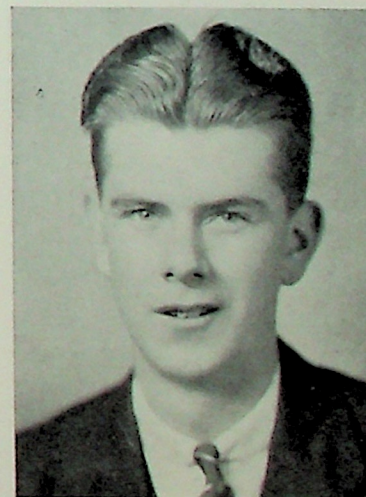
**CLIFFORD A. WARREN**

"Cliff"

**Electrical Engineering**

Plainfield High School

One of Cliff's most noble features is his willingness to stand off and discuss a problem from all angles. This characteristic, no doubt, has enabled him to be among those few who always manage to finish a hard assignment correctly. It is not fortune telling, but character reading, to say that Cliff will get "there." He is made of the stuff that represents the typical Cooper Union student—a hard, conscientious worker with just a little time for recreation.







**MILTON T. WAY**

"Binky"

**Electrical Engineering**

Omega Delta Phi  
Brooklyn Technical High School  
1931-32 Class Secretary  
1934-35 Editor-in-Chief Cable

If ever a man took a job to heart, Milton was the man. Ever since the current year began his every effort has been dedicated to "The Cable," and how he has found time for his studies is still a mystery to all his colleagues.



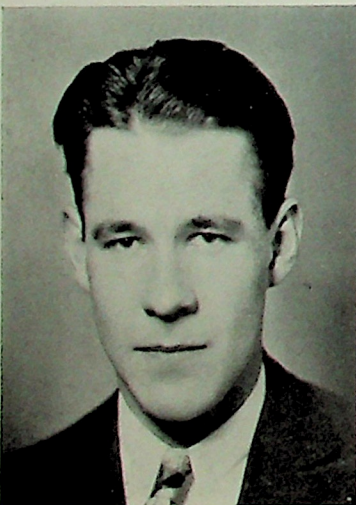
**RUDOLPH V. WEGELE**

"Rudy"

**Electrical Engineering**

Englewood High School  
Mt. Carmel College

"Rudy" is the young brokerage clerk who wants to be an engineer. His diligence and ambition will no doubt pull him through. Although he apparently thrives on hard work, he nevertheless finds time for his pet hobby. He is a dyed-in-the-wool philatelist and pursues a rare stamp with the same ardor with which he tackles "Diffs."



**CHARLES A. WESTERSTROM**

"Charlie"

**Electrical Engineering**

Emerson High School  
1932-33 Class Vice-President; 1934-35 Class Secretary, Cable Representative; A.I.E.E.

In Charlie, the Class of '36 has a great personality. One of his great ideals as an engineer is to never defeat science, as many of his squad members can testify. During his school years, Charlie has been dividing his time between North Bergen and Westfield, although we believe the latter will occupy all of his time at some future date.



**EDWARD G. WHITE**

"Eddie"

**Electrical Engineering**

Bushwick High School

To "Ed" belong those qualities which make us proud to list him among our class of "36." He is conscientious in his work both at school and business, where he toils unceasingly wielding the good old 6H on the drawing board at the Bell Labs. Because of his sterling qualities as a man and his fine spirit of cooperation as illustrated during the laboratory sessions, he is sure to go far in the field of engineering and also in the field of true friendship. Keep smiling Ed and good luck to you.



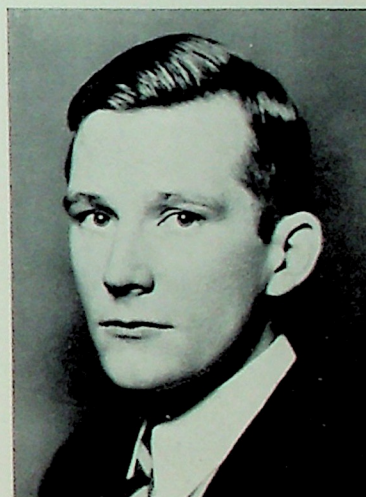
**EVERETT WIESENDANGER**

**Electrical Engineering**

Gorton High School, Yonkers

A.I.E.E.

He has the true spirit of an engineer; that desire for a thorough understanding of a problem placed before him. This spirit has enabled him to maintain his high class standing, and one can anticipate his maintaining the same standing in the engineering field.



**WALTER E. ZENONI**

**Electrical Engineering**

Hebrew Technical Institute

A.I.E.E.

He's very well acquainted with matters mathematical,  
He understands equations, both simple and quad-  
radical,  
About binomial theorems he's teeming with views,  
With many cheerful facts about the square of the  
hypotenuse.  
The ordinary mortal's left agape with consternation,  
When Walter starts to give our math a lucid ex-  
planation.  
The words come mumbling, tumbling, out—Niagara  
isn't in it,  
We don't know what he's saying but the speed's a  
mile a minute.  
To Einstein and Zenoni then, we offer up a hymn  
of praise,  
The men whom neither relativity nor 4th dimension  
can amaze.







**GEORGE BENDA**  
Chemical Engineering  
Bushwick High School

Probably it's the Brooklyn atmosphere, but George is the quietest lad among us. Not that he doesn't know anything worth saying, but he saves it for the right time. That is why when marks are posted, George Benda will have his name well up in the class standings. When the class has its annual dinner, it's George who supplies the smokes but it's not Father who pays—it's the class.



**RALPH JOEL BERGMAN**  
"Murphy"  
Chemical Engineering  
James Monroe High School  
1933-34 Class Treasurer

1934-35 Class Treasurer; Junior Prom Committee

Ralph was elected treasurer twice because the class recognized his ability to count pennies, gained by his experience with Mathematics. His only weakness in the course was his inability to get 100% in any examination, but he seemed strangely unconcerned on getting a paltry 98 in Calculus. He would be a swell fellow if it weren't for his nasty habit of collecting, or trying to collect, that sum of money supposed to be paid for class dues.



**MORRIS COOPER**  
Chemical Engineering  
Oumane High School, Russia;  
University Preparatory School, New York

Perseverance personified. After an absence of over three years, Cooper came back to Cooper Union firmly convinced that there is nothing like an engineering education after all. As a married man, he shuns extra-curricular activities, but makes sure to have his time well spent and hopes to be able some day to contribute his bit to the sum total of human progress.



**JOHN D. CZARNECKI**

"Czar"

**Chemical Engineering**

Dickinson High School  
1931-32 Vice-President  
American Society for Metals

"Czar" is an ardent supporter of "Skeetertown," but he is more to be pitied than blamed for that. He went stumping for Moore when that Cooper graduate ran for the Governorship of New Jersey in 1931. In spite of this help, his candidate was elected. That makes "Czar" the class, Grade "A" politician. However, he seems headed for a brilliant career, not in politics, but in his chosen field of engineering.



**DAVID DRIMER**

**Chemical Engineering**

De Witt Clinton High School

David is one of those boys to whom school is just another Goliath. Holding on to a full-fledged chemist's job, which is an accomplishment in itself, he has little time to spare for study. He nevertheless strides on persistently, and is now well within reach of his goal. Possessing a keen, analytical mind and a genial disposition, he is surely going to get on well in his chosen profession.



**FREDERICK EMIGHOLZ**

"Fred"

**Chemical Engineering**

Omega Delta Phi  
Manual Training High School  
1932-33 Class Treas.; 1933-34 Class Pres.; 1934-35  
Business Manager Cable (Resigned)

A tall, unassuming fellow, who never seems to be working, but always manages to get his work done before the rest of the class, aptly describes Fred. He attains popularity without seeking it, as is shown by his election to various class officerships. Fred is fond of outdoor sports, especially swimming, and his biggest delight is to argue on any subject. His favorite diversions are—the female of the species, mild indulgence, bridge, and sleeping, and his nightmares are all theoretical subjects. Withal, "Fred" is a fine fellow to know.







**JOSEPH A. HILL**

"Joe"

**Chemical Engineering**

New Lots Evening High School

"Joe" Hill bears the reputation of being the most ambitious and most serious-minded member of his class. He seems to be the guiding star of the "Chems" because when any one feels the least bit discouraged they look at him and say, "Now, there's a fine fellow. Why can't I be like him?"



**MEYER M. HUNGER**

"Marty"

**Chemical Engineering**

New Lots High School; Franklin Lane High School  
1934-35 Class Secretary

Marty first came into prominence as a smaller and better edition of Don Juan and Casanova. Combined with this, is his propensity for asking questions that would stump Einstein. To quiet him, the class vested him with the dignity of the secretaryship, but this proved futile. In spite of this, we hope that he will make a successful Chemical Engineer.



**EUGENE A. KELLY**

"Gene"

**Chemical Engineering**

Hempstead High School

Omega Delta Phi

1931-32 Class Pres.; Students Council; Pioneer Staff;  
Tennis Team; Annual Dance Committee

1932-33 Pioneer Associate Editor;

Manager Tennis Team

Gold "C"; Pi Sigma

1934-35 Publicity Manager Cable; Night Annual  
Committee

Only Gene could solve the problem of squeezing in all his activities with commuting to Hempstead morning and night and holding down a job in addition. In the few remaining hours at his disposal he can be seen dashing through the halls to make some athletic, social or fraternal function move a bit faster and better. Gene is a crack contract bridge and billiard player, a tennis star with many cups and tournaments to his credit, a brilliant scholar, and a lion with the ladies.



**ABRAHAM SCHNEIDER**

"Sleepy Gus"

**Chemical Engineering**

De Witt High School

Far be it from us to dwell on the merits and demerits of this would-be chemical wizard who humbly trudges the halls of Cooper Union. He has no favorite teacher but he rather dislikes those who speak in a loud monotone, interrupting his cat-naps in class. His pet hobby is catching the 10:10 each night in order that he might meet his "one and only" before he wanders off in the arms of Morpheus.



**LOUIS JOSEPH SCHRAMM**

"Lou"

**Chemical Engineering**

Lambda Tau

St. James High School

1930-31-32-33 Pioneer

1933-34 Class Vice-President; Business Manager

1934-35 Junior Prom Committee;

Math. Club; Newman Club

His proudest boast is that he comes from God's country. (Only God can find it.) In spite of that short-coming, he is popular with his classmates and has been active in extra-curricular affairs. "Lou" does everything with the same determination he displays when playing football. This may not explain why he is a member in good standing in school work, but it does tell why, on each Monday, during the football season, he would limp painfully into the classroom, sometimes displaying a black eye or cut lip.



**NATHAN WALD**

"Nat"

**Chemical Engineering**

Eastern District High School

1934-35 Class President; Circulation Manager Pioneer  
Junior Prom Committee, Night Annual Committee

Nat came to the Chem Class as a transfer from the Civil Engineers. Undaunted by so many new faces, he pitched in and raised himself up to the Class Presidency. Now he has so many extra-curricular activities, that every Sunday morning he has to introduce himself to his folks. His one failing is in retorting too tartly to his instructors. This has gotten him into one scrape after another, but so far he has always come through with flying colors.





## PI

Some unknown sent the following lines to the magazine, NATURE:

Sir, I send a rhyme excelling  
In sacred truth and rigid spelling  
Numerical sprites elucidate  
For me, the lesson's dull weight.  
If Nature gain  
Not you complain  
Tho' Dr. Johnson fulminate.

The uniqueness of the poem lies in that the words give the value of pi by the number of letters in each word. Thus —

|     |   |      |   |       |      |
|-----|---|------|---|-------|------|
| Sir | I | send | a | rhyme |      |
| 3   | 1 | 4    | 1 | 5     | etc. |



THE CLASSES

NIGHT  
SCHOOL  
OF  
ENGINEERING





E. V. B. KETTLEMAN  
President



S. F. COHEN  
Vice-President

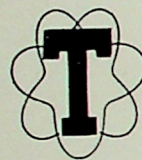


S. KORETSKY  
Secretary



H. C. HORNICKEL  
Treasurer

## CLASS OF 1938



HE class of 1938 is unique in that it is the first class of the new six-year courses which started in 1932. Up to the present school year, the courses for all these potential engineers has been the same and it is only now that the embryo engineers in this class have branched out into their chosen fields, thus one large class has been divided into four. All the courses are still united, however, in the mutual subject of "Elements of Trade and Contracts" which is taken twice a week by all the classes at one lecture. With this new subject tucked under their hats, the boys sure will be clever business men as well as intelligent engineers. The Administration of the school realized the importance of this bond of knowledge with present day competition when they elected this subject to broaden the courses.

The students of the third year fully appreciate this but in a more jovial mood they say, "all work and no play makes Jack a dull lad." With this in mind the first year the members elected an Entertainment Committee which sprang a surprise on the entire school by arranging for an Entertainment and Dance which was held in the hall of the Hewitt Building. The main feature of the occasion was an address by Dean G. F. Bateman.

The second year, when the more disinterested members of the classes had been weeded out, the class proceeded to carry out the good work begun the previous year and arranged for a dance which was held at the Pythian Temple. The publicity given this affair was so good that a good portion of the school attended, making it successful financially and socially. It is only fair to mention that the spirit prevailing in the class then was no doubt due to the interest shown by their president, John Morrissey, who is now in the E.E. section of the class.

During the following year, when the boys had gotten into the real swing of class fraternalism, the E.E.'s and the Chem.'s under the leadership of John

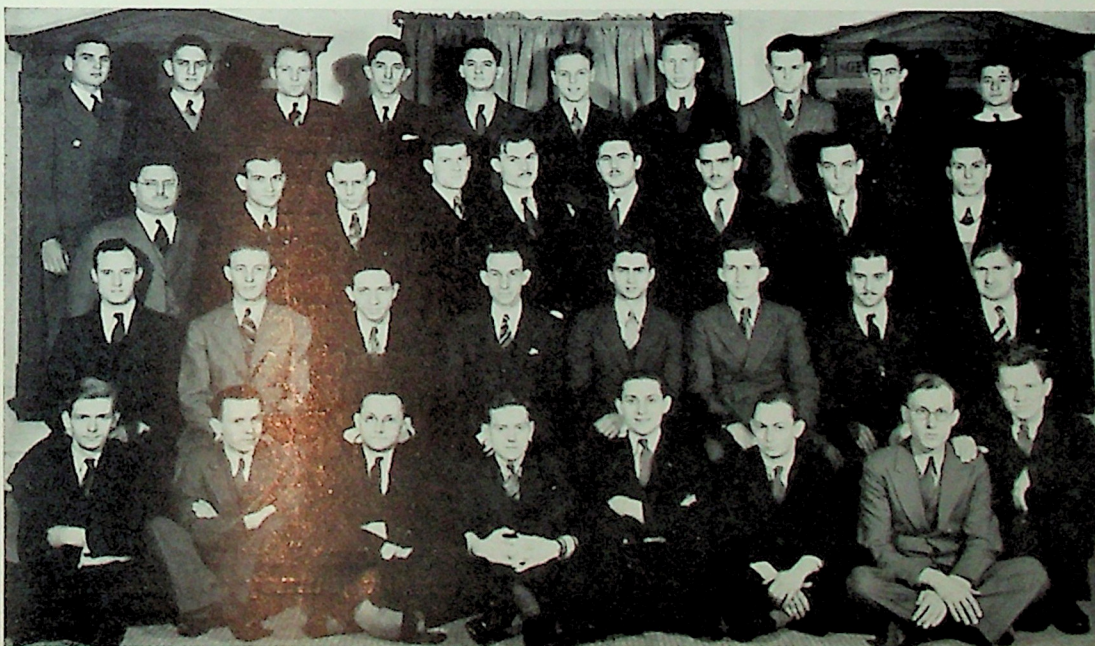


## T H E \* C A B L E \* O F \* 1 9 3 5

Gumbrecht held a Beer Party and Dinner and Show, both of which registered very favorably with the fellows, although there is no doubt that the Beer Party was the favorite of the two.

Though the class has shown great interest in making their college days memorable days in a social sense, they have nevertheless dedicated themselves to the task of preparing lecture notes, plugging away to keep abreast of the instructor in the Calc class and the inevitable routine of cramming for exams. This year the class has honored Mr. Kettleman, of the E.E. group with the position of president. The social functions have all been top notchers but they all look forward to that day on which Cooper Union will confer them all Engineers and will send them out "to make the wheels go round."

With the culmination of our year's work, came the final tussle — examinations. The great majority of us met the tests fearlessly, for we knew that back of us were honest efforts. Our confidence was not unwarranted as proven by the grades received. Our class expects to work just as diligently on next year's extra-curricular activities as it has on this term's work. The 1936 CABLE will have a board well sprinkled with members of the Class of 1938. With the usual financial worries removed by the Blanket Fee, our representatives should not have any difficulty in producing a book worthy of the name CABLE. We look forward to bigger and better things from our class and we are sure we won't be disappointed.







ALBERT OSSI  
President



WILLIAM CHARNEY  
Vice-President



JOHN W. FISCHER  
Secretary



MARKO A. KUSEVICH  
Treasurer

## CLASS OF 1939



E are encouraged to note the continued manifestation of the aggressive spirit so prominent in our class throughout the first year. However, due to the new and seemingly greater responsibilities incurred after passing the first milestone, the efficacy is turned to the attainment of scholastic rather than social achievements.

Once again the first extra-curricular activity was the election of officers. When the ballyhoo and disturbances peculiar to elections had died out, we noted that Albert Ossi, William Charney, William J. Fisher, and Marko Kusevich emerged the victors as President, Vice-President, Secretary, and Treasurer, respectively. We wish to thank our Executive Committee for the efforts they have made towards establishing the "Blanket Fee". We will endeavor to show our appreciation through a wholehearted support during our remaining years at Cooper Union.

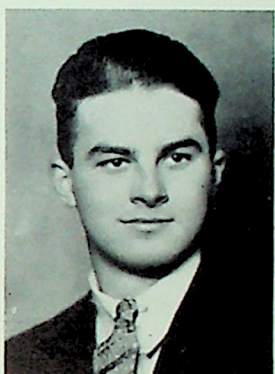
A class meeting was held on the 22nd of February for the purpose of deciding the nature of the annual class function. At this meeting there was a comparatively small number of students present. The Executive Committee decided that since the minority of students there showed, through their presence, the majority of the class interest, whatever was decided at that meeting should be representative of the whole class. After many suggestions, much discussion and elimination, it was decided to have a boat ride to Indian Point. The excursion was fittingly named the Sophomore Sally. One of the largest factors for this decision was the success of last year's Freshmen Frolic.

Walter Goversen was elected to act as chairman of a committee whose main duties were to run a successful boat ride. The members of the committee performed their various duties well and hence, we have many more pleasant memories to cherish throughout the years to come. We enjoyed the company of the men in the class of '40 and look forward to renewed acquaintances next year.

We take this opportunity to again say a warm, sincere "thank you" to our faculty for their persistent efforts in helping us on our journey to the second milestone.



## CLASS OF 1940



H. M. ANDERSON  
President  
S. M. KALIFON  
Secretary  
N. ROCHLIN  
Section Representative

M. A. MEYER  
Vice-President  
F. MCGINNIS  
Treasurer  
H. STIVELBAND  
Section Representative

**F**ROM all walks of life come the members of this class spurred by the general optimism due to the New Deal hoping to scale the heights of engineering. Whether office, subway, telephone, refrigerator or soda fountain worker; Jerseyite, Brooklynite, Bronxite, or Manhattanite; this cosmopolitan group has all intentions of making Cooper Union history. In financial support of the various activities, they have far surpassed previous freshmen. Physically and spiritually they are stoutly behind every extra-curricular organization open to them.

The scholastic grind taxes the capabilities of all classes. Relentlessly, the wheels of progress have separated the chaff from the grain, the bluffers from the real student; but this class has managed to lose few members at this date which is a tribute to the character of Cooper students.

Were we to mention some outstanding personalities in the class, this book would be devoted to them alone. Of course, there are the usual class wits and wizards, and everyone is familiar with them. Each section has its radio team (Not entertainers, but "Bugs"); each has its unofficial class humorist and each at least one great mathematician, but most freshmen have some claim to prominence in Cooper and, perhaps, will reach greater importance later.

The following article is fittingly dedicated to the freshmen so that they may better know their school and its history.



## A LITTLE ABOUT YOUR SCHOOL

By A SENIOR



ALL College Alumni hold sacred and hallowed the memories of the years they spent as members of their classes. The graduate likes to recall the days of fun and frolic and fuss over his souvenirs steeped with that "good old college" tradition. Well fixed in his mind is the time his "Gang" removed the statue from the town square and the occasion when they mobbed the town jail to free several of his classmates. "Those", he gently sighs, "were the good old days".

But, when we think of a large rolling campus, shady elm trees, ivy-covered buildings and a huge athletic stadium, Cooper seems a prosaic business-like institution. All these features of a typical American University that go to enhance memories are mere figures of speech to us. Yet, our own surroundings possess enough color and romance to remove the drabness from our book of memories of Cooper Union. Very few people are aware of the mass of interesting data that can be gleaned from our historical buildings.

Our great hall has been the arena of many great political battles. Within its walls, the voice of the great Emancipator, Abraham Lincoln, was heard when he ran for the Presidency in 1860. The hall has always been the scene of the organization of New York City's reform parties. A long list of organizations of all creeds and colors use the Hall for verbal fist waving.

The building itself has many unique features. The first iron beams to be constructed in New York City were designed for this building. Colonel





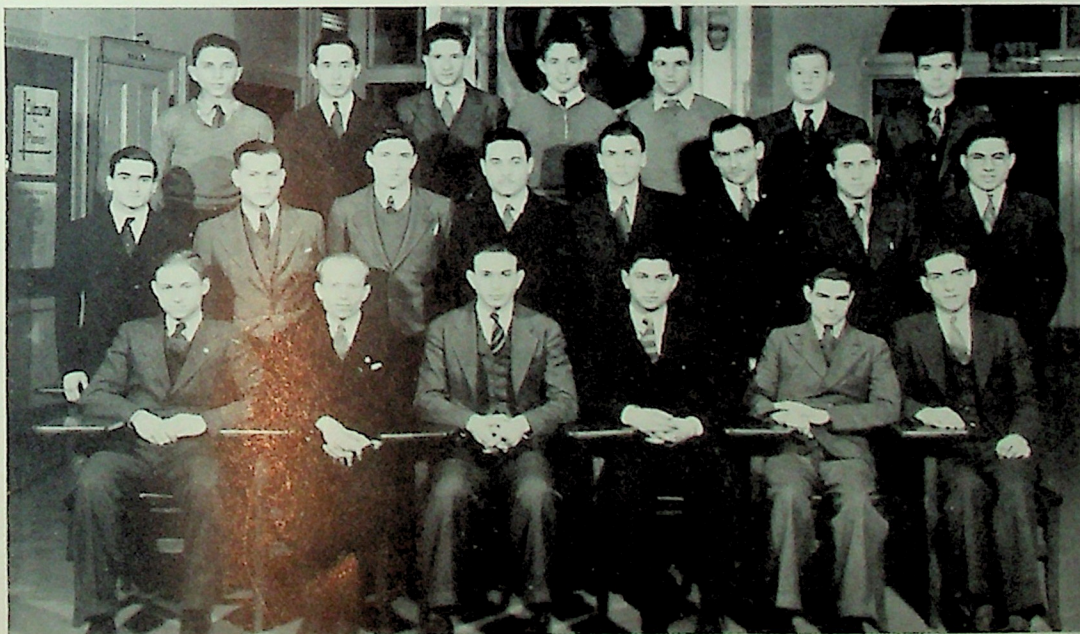
## T H E \* C A B L E \* O F \* 1 9 3 5

Harper hearing of this and knowing the worth of this new idea in structures, made the founder of our school a sizable offer for the beams. Peter Cooper always had an eye for funds he could use to further his aims and a deal was made. New beams were ordered and our school therefore is the second to be constructed with iron beams. This was before riveting was used and, upon close observation one can notice the peculiar "lock joint" that holds the beams together. Our founder, that far-sighted keen-minded citizen, Peter Cooper, made provisions for an elevator in his plans, making his building the first designed with an elevator shaft. He allowed for a round shaft to be constructed and, when the elevator came into general use, a square car was installed. Thus, we have the peculiar phenomenon, a square car in a round shaft.

A rather unknown portion of this historical building is the boiler or engine room. Very few students have ever had the opportunity to explore it. Many feet below the level of the street lies a scene suggestive of a medieval laboratory at the time when scientific experimentation was banned. A long cavernous chamber with many twisting tunnels is filled with mysterious machinery all brightly polished so that it gleams in the light from the electric bulbs. The only sound is the hum of motors. Here is located the heating system, the blowers for the ventilating apparatus and many pumps.

On one floor of the Foundation Building is found something that is a complete mystery to engineering students. The art museum is famous among artists and architects but as for the engineers — well, Zilch knows a fellow whose cousin knows someone who at one time visited it.

The Hewitt Building is worthy of our attention. Although, it now consists of but two stories, the original plans call for eight or ten. It is intended to hold



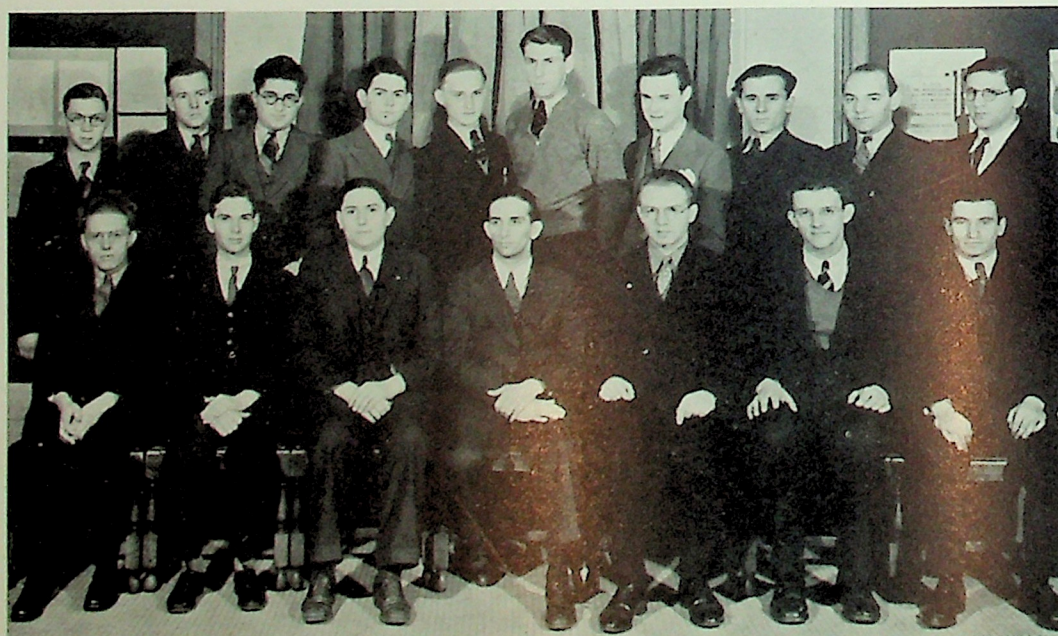


a fully equipped gymnasium besides the most modern engineering school laboratories. Some day, when sufficient funds are available, the remainder of the building will be constructed.

In the background of the picture of Dean Bateman, will be seen a massive bronze ship's bell. This bell formerly belonged to the "S. S. Caronia", a British merchant ship that no longer plies the seas. This was one of two ships that were constructed with the new innovation of "steam turbine" drives, which have since proven their superiority in Marine Engineering. On being dismantled, this ship's bell was given to Cooper Union, and now hangs in the Dean's Offices in the Hewitt Building. A fitting award to a Mechanical Engineer.

Between the two buildings lies Third Avenue. This is our oft crossed campus. Here elevated trains go thundering by overhead. Interminable trucks and trolley cars go rattling by to the everlasting torment of Cooper Students. Should the unwary student pause while crossing the "Campus", he may find himself tapping at the pearly gates of St. Peter. This has not happened as yet, "knock wood". Our "Campus", being a continuation of the Bowery, is strewn with lost and discouraged souls who, somehow, find solace in resting their weary heads almost in the lap of Peter Cooper's statue. This memorial stands in a small triangle of soil that manages to flaunt its greenness each summer against the turmoil that surrounds it.

Overlooking the little patch of green on the south side of the Foundation Building, as the original building of Cooper Union is known, is a large clock. Installed when the building was erected, it bore the distinction of being the first of its kind in New York. It has continued to keep the correct time through careful servicing, and has looked down upon the many changes in customs





## T H E \* C A B L E \* O F \* 1 9 3 5

and the rapid advancement that has taken place in the three-quarters of a century of its useful existence.

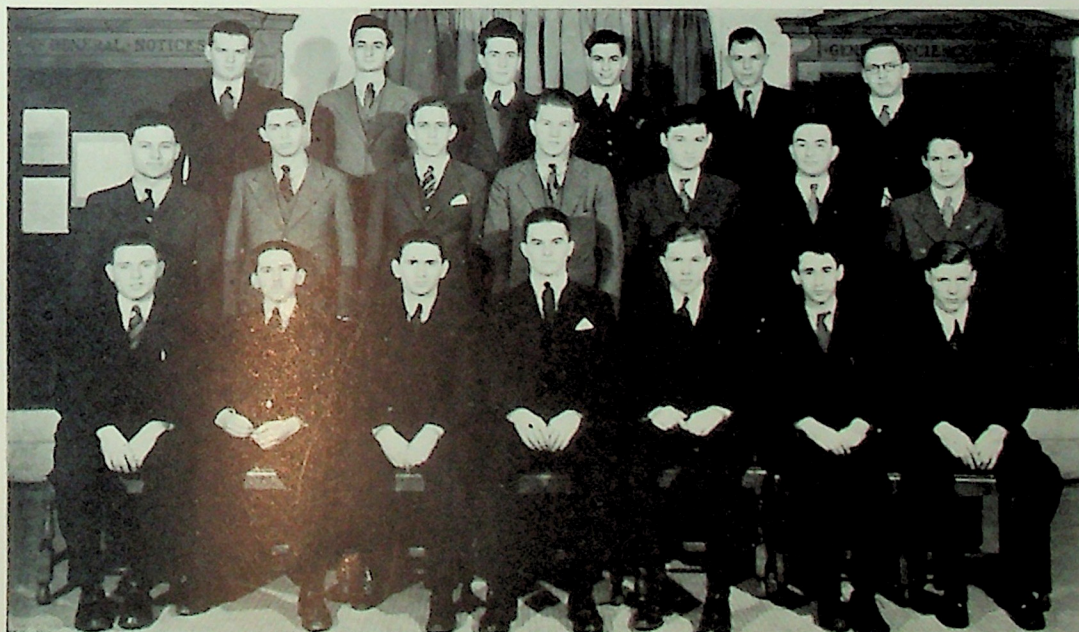
When Peter Cooper built the Union, Eighth Street was "Uptown". At that time, about 1860, the center of the town was located at Park Row, Canal Street, and City Hall. Forty Second Street and Fifth Avenue, were merely a succession of estates. One Hundred and Twenty Fifth Street was known as out of town. For this reason our founder intended the Eighth Street side to be the rear of the School. But progress follows no man's plans. Business, hotels and theaters gradually moved uptown leaving the Cooper building in reverse.

Cooper Union has its traditions like any other college in spite of the fact that they are not obvious to the student. Our gridiron eleven won the distinction of losing more games in succession during the 1930-1-2-3 seasons than any other football team the country over.

In the spring of 1933 a new constitution was formed together with a new set-up of the athletic association which formally outlawed football at Cooper. In spite of this, the eleven went forward undauntedly to do or die for their alma mater.

They did their best to continue this nationally famous losing streak but the day they met the N. Y. Aggies spelled their doom. The Aggies continuously gave way down the field forcing good old C. U. across the Aggies line. After this momentous feat, both teams were so astonished that they were unable to handle the pigskin, according to Walter Camp, and the end of the game soon overtook them leaving our alma mater on the long end of a 6-0 score.

This marked the end of a national reputation. Our football heroes wore long faces as they passed slowly into the locker room. No longer would they





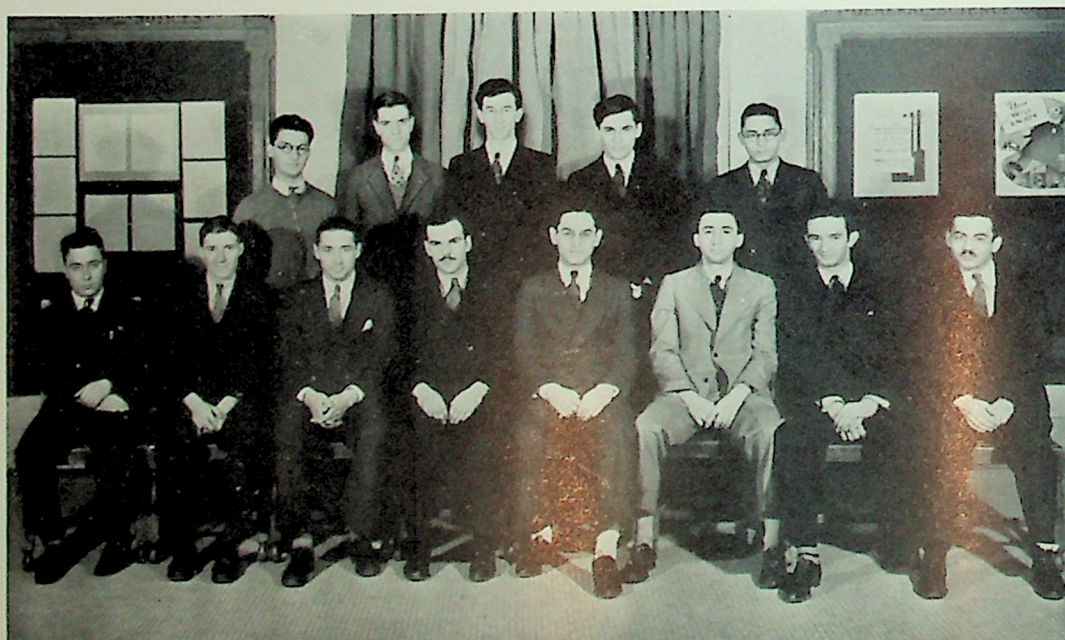
## T H E \* C A B L E \* O F \* 1 9 3 5

be a household byword, but just another of the countless number of unsung football elevens in the United States.

Our basketball quintet comes into a different category. Despite innumerable handicaps and the quality of the opposing teams they have managed to win several of their engagements.

The Cable has its traditions too. Originally a souvenir program to the annual affair of the Cooper Union Students League, it has grown to major proportions since its inception in 1918 when it was called "The Cooper Courier". The name "The Cable" was chosen because it commemorated the occasion of one of Peter Cooper's most notable achievements, his connection with the laying of the Atlantic Cable in 1886. At the same time the name suggested a bond of friendship. Only slight changes have been made in the form since the book first formally made its appearance in 1922 as a year-book.

In keeping with the prevailing spirit existing in all colleges, Cooper Union also has its roster of Fraternities, three of which have been founded by students in the Engineering and Architectural Schools. The first to make its appearance in our midst was founded in 1903 in the Night School. Others have come in the normal trek of time; the last one having been started by a former Cable Board whose members were desirous of continuing the friendships begun while grinding away on our annual publication. All these fraternities have been extended to other colleges so that one now has five chapters in New York colleges, while another has a total of seven chapters scattered through the East. The Day School has an honorary society, Mu Alpha Omicron, membership to which is conferred only upon those students who have shown meritorious scholastic endeavor. It is of interest to note





## T H E \* C A B L E \* O F \* 1 9 3 5

that all these fraternities have members on the teaching staffs of all the departments in the school.

Each Department in the Cooper Union Schools of Engineering has its own Student Professional Society. These are affiliated with such institutions as The American Society of Civil Engineers, The American Institute of Electrical Engineers, etc. Nothing has been neglected in the line of extra-curricular activities to detract from the "real college" air in Cooper Union, and it is by taking an active part in these activities that some men rise to the fore and attain popularity and student esteem.

Of the personalities connected with Cooper Union, volumes can be written. We have had few presidents since the school was founded. Peter Cooper, his son Edward, John E. Parsons and R. Fulton Cutting were the only predecessors to Dr. Gano Dunn. The latter is no stranger to the struggle of a majority of Cooper Students. He, too, had to secure an education and earn a living at the same time. Having had to gain his education while employed as a telegraph operator, he has a sympathetic understanding of the needs of our student body.

An innovation in Cooper has been the new department of Social Philosophy headed by Dr. Everett Dean Martin, famous liberal speaker. The Doctor is an author whose books are widely known and read.

A list of alumni of Cooper includes such names as Michael Pupin, Gov. Moore of New Jersey, Girardhi and Ben Bernie. We who graduate now hope that someday we shall achieve some small part of their prominence.

Carry on, Freshmen!



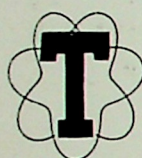


## FERMAT

England and France have long been rivals. Interminable wars have fanned this enmity. Even in Mathematics we find this true, for French savants claim that some of the glory given to Sir Isaac Newton for the invention of Integral Calculus should have been bestowed on Pierre de Fermat, a counselor of the Toulouse Parliament, who studied Mathematics for recreation.

For the mathematically inclined student we present a discussion of Fermat's world famed theorem, as prepared by Mr. A. H. Beiler, of our Mathematics Department.

## FERMAT'S THEOREM



HERE is probably no more fascinating field of mathematics for the amateur to browse in than the theory of numbers. Some very intriguing theorems and problems are encountered even in the elements of the subject. No long course of preliminary training is necessary, and equipped with a knowledge of only high school mathematics, a beginner can easily master the most important fundamentals of the subject. It is almost as tho one could play a Beethoven sonata after only a little training at the piano. For many students to whom mathematics means drudgery and homework (and perhaps a little somnolence in the classroom) this comparison may seem far fetched and incongruous. Yet one often feels a thrill when discovering some interesting property of numbers which is closely akin to the feeling one gets when listening to some beautiful chamber music.

Some of the subjects covered in number theory are typified by problems such as these:

1. Has 3,628,801 any divisor or is it a prime number?
2. For what value of  $x$  is  $2^x - 1$  a prime?
3. Find the least number with 100 divisors.
4. Prove that every even number is the sum of two primes.
5. Show that  $(n-1)! + 1$  is always divisible by  $n$  if  $n$  is a prime but not when  $n$  is composite.
6. One side of a right triangle is 29. Find two whole numbers which may represent the other two sides.
7. Prove that  $x^n + y^n = z^n$  is impossible in integers if  $n$  is greater than 2.
8. Find a number which is equal to the sum of its divisors (unity is included as a divisor).
9. How many integers are there less than and having no factor in common with 5929?
10. Prove that every prime number of the form  $4x + 1$  is expressible as the sum of 2 integer (whole number) squares, in one, and only one, way.

Fermat's theorem occupies an outstanding position in the theory and has a wealth of interesting historical background. In its simplest form it may be stated as follows:

"If  $p$  is a prime number, and if  $x$  and  $p$  have no common divisor, then  $x^{p-1} - 1$  is always exactly divisible by  $p$ ." Thus, 7 is a prime and 4 and 7 have no common divisor and, therefore,  $4^{7-1} - 1 = 4095$  is exactly divisible by 7.



Now, number theory owes much of its fascination to its many pitfalls, dangerous by-paths and cul-de-sacs. The method of attack except for the simplest types of problem is not clear cut and defined, and some of the easiest sounding problems, like problems 4 and 7 above, have so far baffled the greatest mathematicians. "Proofs" are especially difficult and this often tempts the amateur to jump to conclusions or to "prove" what is required by the method of induction: to take a number of cases, try them and if they work each time, make a generalization. If you do that in number theory, the chances are excellent for your falling promptly into a mathematical pitfall.



In Fermat's theorem there is a great temptation to read the word "only" before the "if" and to conclude that if  $p$  is not a prime,  $x^{p-1}-1$  is not divisible by  $p$ . Thus, take  $p=6$ , and  $x=5$ . Then  $5^{6-1}-1=5^5-1=3124$  and this number is not divisible by 6. And case after case can be found for composite numbers where the result is not divisible in this manner. The Chinese, in fact, assumed the theorem to be true for primes only, arriving at their result solely by induction. If it were true for primes only, one would have a criterion for recognizing a prime number, since if the division came out exactly the divisor would be a prime, and if it did not come out exactly, the divisor would be composite. This apparent converse of the theorem is, in fact, untrue, since  $2^{340}-1$  is exactly divisible by 341, altho 341 is not a prime but equal to  $31 \times 11$ . Again,  $3^{90}-1$  is divisible by 91, which is not a prime but equal to  $7 \times 13$ ;  $4^{14}-1$  is exactly divisible by 15, etc. The writer has worked up a table of exceptions of this kind for all bases from 2 to 100. The numbers in the above examples may appear very large and, of course, the determination of exact divisibility by ordinary arithmetic would be very tedious. But by the method of congruences developed by the great mathematician Gauss, one can almost immediately show that  $2^{340}-1$  is exactly divisible by 341.

Fermat's theorem is **always** true for prime numbers and **sometimes** true for composite numbers.

There are many proofs of Fermat's theorem. About the simplest is by means of the polynomial theorem. From the binomial theorem we have:

$$(x + y)^p = x^p + y^p + \text{other terms.}$$

If  $p$  is a prime, then the numerical coefficient of each of these other terms must contain  $p$  since, being a prime, it could not have been canceled out by any term in the denominator of the binomial coefficient. Thus:

$$(x+y)^7 = x^7 + y^7 + \frac{7x^6y}{1} + \frac{7 \cdot 6x^5y^2}{1 \cdot 2} + \frac{7 \cdot 6 \cdot 5x^4y^3}{1 \cdot 2 \cdot 3} + \frac{7 \cdot 6 \cdot 5x^3y^4}{1 \cdot 2 \cdot 3} + \frac{7 \cdot 6x^2y^5}{1 \cdot 2} + \frac{7xy^6}{1}$$

But if we had:

$$(x+y)^6 = x^6 + y^6 + \frac{6x^5y}{1} + \frac{6 \cdot 5x^4y^2}{1 \cdot 2} + \frac{6 \cdot 5 \cdot 4x^3y^3}{1 \cdot 2 \cdot 3} + \frac{6 \cdot 5x^2y^4}{1 \cdot 2} + \frac{6xy^5}{1}$$

where 6 is not a prime, some of the numerical coefficients lose the 6 by can-



cellation with terms in the denominator so that in this case only the third and last terms retain 6 as a factor. We can then say that if  $p$  is a prime

$$(x+y)^p = x^p + y^p + p(Q)$$

where  $Q$  represents the balance of the terms after  $p$  is factored out. Extending the binomial to the polynomial theorem, we have

$$(b_1 + b_2 + b_3 + \dots + b_x)^p = b_1^p + b_2^p + b_3^p + \dots + b_x^p + p(Q).$$

Letting

$$b_1 = b_2 = b_3 = \dots = b_x = 1,$$

we have

$$x^p = x + p(Q) \text{ or } x(x^{p-1} - 1) = p(Q)$$

Then, since the right hand side is divisible by  $p$ , the left hand side must also be divisible by  $p$ . And if  $x$  is prime to  $p$ , which we take as an hypothesis, then  $x^{p-1} - 1$  is divisible by  $p$ , and this proves the theorem.

There are many other interesting theorems associated with Fermat's. In the form given above, the theorem is merely a corollary of the more general theorem that if  $x$  and  $p$  have no common factor, and  $p$  is any number (prime or composite), then  $x^{\Phi(p)} - 1$  is exactly divisible by  $p$ , where  $\Phi(p)$  means the number of integers less than  $p$  and prime to it (a number is prime to another when they have no common factor). If  $p$  is a prime, every integer less than it is prime to it and thus  $\Phi(p) = p - 1$  and we get the form which was proved above. As an example of the general case, the number of integers less than 15 and prime to it is 8, namely, the integers 1, 2, 4, 7, 8, 11, 13, 14. Thus,  $\Phi(15) = 8$  and taking  $x$  as any number prime to 15, say 2, we have  $2^8 - 1 = 255$  is exactly divisible by 15.

The true converse of Fermat's theorem is this: If  $x^{p-1} - 1$  is divisible by  $p$ , but if there is no smaller integer  $e$  than  $p-1$  for which  $x^e - 1$  is divisible by  $p$ , then  $p$  is a prime. By means of extensions of this theorem and a photo-electric factoring machine, D. H. Lehmer of the University of California has investigated the factors of numbers so large that the entire lifetime of the most skilled computer would not suffice to investigate even a single such number by other means.

Other extensions of the theorem lead to the elegant subjects of primitive roots and quadratic residues, fields that will amply repay the amateur for any time spent in studying them.

An interesting problem is to find composite numbers for which Fermat's theorem holds for **any** base prime to the composite divisor. In the three composite divisors given above,  $2^{340} - 1$  was exactly divisible by the composite number 341 but  $3^{340} - 1$  would not be so divisible. Similarly, altho  $3^{90} - 1$  is divisible by 91,  $2^{90} - 1$  is not so divisible. The problem here is to find a composite number  $n$ , such that  $x^{n-1} - 1$  is divisible by  $n$  for **all** numbers prime to  $n$ . The solution of this problem is not simple and some rather neat reasoning is involved. The least solution is  $x^{560} - 1$  which is divisible by the composite number  $561 = 3 \times 11 \times 17$ . Here  $x$  can take on **any** values except multiples of 3, 11, or 17. Thus,  $2^{560} - 1$  is divisible by 561, but so is  $4^{560} - 1$ ,  $5^{560} - 1$ ,  $7^{560} - 1$ , etc., which is a really remarkable relationship when you come to think about it. Such composite divisors are few and far between. The writer has a list of only eleven of them. The largest of these is  $16046641 = 13 \times 37 \times 73 \times 457$  and  $x^{16046640} - 1$  is divisible by 16046641 for **all** values of  $x$  which are prime to 13 or 37 or 73 or 457.

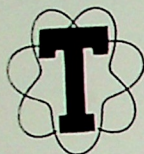


THE CLASSES

INSTITUTE  
OF  
TECHNOLOGY



## MECHANICAL ENGINEERING CLASS OF 1936



HIS is the saga of those unwritten and unheralded M.E.'s who are noted for their anything but enthusiastic support of all activities. It is the purpose of that which is about to follow to introduce the parts that make the whole.

ABRAHAM BERLIN, a fitting start, for he possesses some of the typical characteristics of a Cooper student. He is industrious, quiet, efficient and a willing worker and helper, who is well liked, mustache and all.

JOSEPH J. COPO carries a mess of statistics and is always ready to quote them at the slightest provocation, and therefore is not a man to argue with. He is a great one for passing out nuts and then telling of the three wise Chinamen.

EDWARD G. FISCHER is the small man with Napoleonic potentialities. His neatness is proverbial and his reports are an oasis to the weary and bleary-eyed laboratory instructors. Furthermore he'll take no wise remarks from anyone and hence rates as a regular fellow.

SANFORD FOX faces the world with a chip on his shoulder. His every query in class is a challenge. The rest of the class is indebted to him for many a heated argument that has kept them falling into blissful slumber.

BERNARD KLEBAN is a follower of Marx, not with an obnoxious fanaticism but rather with a humorous outlook on the liberal philosopher's doctrines. He, nevertheless, takes every opportunity to score his points for labor and our "forgotten man". One instructor once said to him, "Stop being a big kid and get to work." This is an epitome of Ben: big bulk, a dislike of strenuous application, and a lover of fun.

FRED KORN is another small fellow who does things in a big way. He is the wizard who startles the class with his brilliant solutions of problems by methods which usually turn up in the next lesson. This characteristic of preparedness coupled with his insatiable desire to accomplish something, has given him the highest scholastic rating of this section. Freddie, however, is more proud of his being on the water polo and basketball teams.

CHARLES MIKULKA is the big A.A. man with the ear-to-ear smile. He is one of the most active men in the school but is a little squeamish when it comes to giving pep talks for Cable support. If the rest of the fellows in the school had the spirit of Charlie, extra-curriculum activities would not fear insufficient support.

VINCENT T. MOORE is distinguishable for his practical trend of thought which gives rise to his asking pertinent and useful questions. He is a good scholar but he prefers applied rather than abstract theory. It is his dislike for abstruse thinking that sometimes makes him appear lazy. He is partial to tennis and swimming and is noted for his humor.

CARROLL T. G. MURPHY is a certain red-headed Irishman in our section who has been late more often than any other man. The reason for his lack of punctuality is that he sticks to a job he has started and often gets stuck with it.

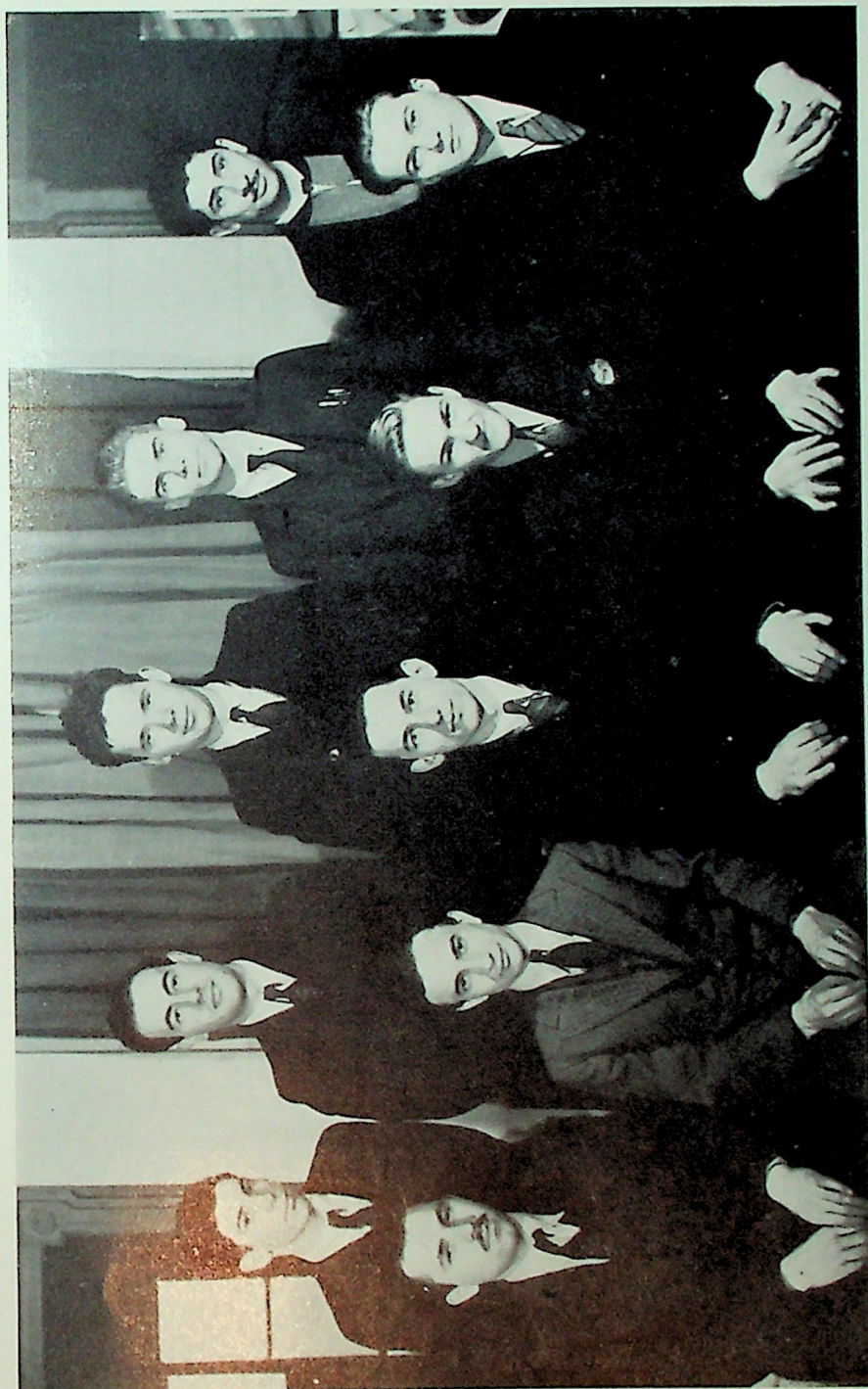
ISADORE STILLMAN is the boy with the mustache and bushy hair who would like to be known as a genius. He has the idea that he is a brilliant thinker of pure thought but the rest of the fellows in the class have given him their own rating.

SIDNEY SWERTLOFF is a quiet fellow who only shows his humor in the Pioneer humor section. He has done a commendable job of gathering some of the best wit the paper has had the pleasure to print. A great guy and a loyal supporter of Cooper Union activities.

HENRY M. WALES is called the boy from New Rochelle. He answers to the call of "Hark", if he can be caught off his motorcycle. Riding his iron horse is his hobby.

LYLE B. WEBSTER was appointed secretary of the A.A. because of his serious and conscientious attitude. He likes to go swimming but is more noted for his stubborn tenacity and ability to stand behind anything he says.





A. BERLIN  
J. CAPO

L. WEBSTER  
E. FISCHER

H. WALES  
C. MIKULKA

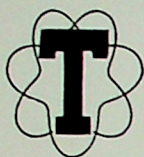
S. SWERTLOFF  
F. KORN

U. MOORE  
I. STILLMAN

STANDING  
SITTING



## CIVIL ENGINEERING CLASS OF 1936



HE class does not claim to be exceptionally brilliant though, as usual, there are a few students well above normal intelligence. Professor Brumfield remarked that the class learns very rapidly, but added that it forgets even more rapidly. The members of the class enjoy drawing very much as is attested by the fact that so many of them are willing to remain after classes very often to work on a Structural Design plate. (Don't cause embarrassment by asking why!)

A short word sketch of each of the members will reveal the hidden and unusual talents possessed by this unusual group.

ABRAHAM PATT—

"But, Professor, you told us last week that . . ."

"That's not fair, you ought to tell us what the exam questions are going to be."

"Listen, I was up until three o'clock this morning working on the Pioneer. And then I had to do my Re-enforced Concrete."

SHERMAN GLASS—

"But I don't see how you can say that the square root of nine is three, really I don't."

"Yes; I see that, but now you take this case . . ."

"Honestly, I'm exhausted, the darn problem has me up a tree."

JOSEPH RUZIKA—

"You see that there equation, yea, that's the one I mean. Well, this here one is simpler than that, I done it this here way at home and it just fell apart."

"Doggonit! I had a chance to get high and low this week, but those darn Phillies had to get shut-out. Well, I got low anyway."

HARVEY HEINE—

"No, no. You can't say that if you had done it the other way you would have had it right. What you mean is that if you had been able to see what you were copying you would have gotten a hundred."

"Now, George, is that nice?"

ROBERT FLETCHER—

"I can't quite visualize what the instructor means by this correction. Professor, would you mind explaining why you say that this is not the same as that? It would clear matters up considerably. Please."

GEORGE YOKOTA—

"What, you don't know how to do that? I handed that problem in last week. Yea, I got it back today. Yea, it was all wrong. Well, how was I to know he wanted that done? I didn't do it. So what!"

HENRY LIEBER—

"If you guys didn't fool around so much you'd have that done, too. Sure, I worked on it at home."

"I don't know how I did that, I done it long ago. How d'yuh expect me to remember? Look it up in the book."

IRVING BLACK—

"Youse guys give me a pain in the neck. Why dontcha let a guy alone when yuh see he's tryin' to work. Just cuz you wanta loaf doesn't mean that I gotta loaf, too. G'wan, scram!"

FREDERICK BAPTISTA—

"Now, you see, if you had paid attention when he explained it in class you'd know how to do that. Well, I'll have pity on you, here's how you do it."

"Sure I'm different. Do you think I want to be like you guys?"

ADOLPH MARRONE—

"You fellers would learn a lot more if you didn't fool around so much. You're only wasting your own time."

DAVID LIPSCHITZ—

"You dunce! You should have discarded the diamond and then cross-ruffed. Now you lose that trick."

"How should I know? Ask Patt."

"Hey, Patt, give Harvey that Mech of Mat problem when you're through with it."





|          |              |           |                |            |              |
|----------|--------------|-----------|----------------|------------|--------------|
| STANDING | H. WEINSTEIN | S. GLASS  | F. W. BAPTISTA | A. MARRONE | D. LIPSCHITZ |
| SITTING  | J. RUZIKA    | H. LIEBER | G. J. YOKOTA   | I. BLACK   | A. PATT      |



## ELECTRICAL ENGINEERING CLASS OF 1936



FOR three long years now, we have wended our way to classes in the now familiar halls of Cooper Union. When we remember how strange these halls once seemed to us, we feel as though we had spent our entire lives here. But to contradict this, when we think that we are about to pass to the ranks of lordly seniors, the time spent in our classrooms seems to have been very brief.

There are many painful gaps in the ranks of our classes, but, after all, we knew that many of our brothers would fall by the wayside. Those of us who remain are doing our best to keep high the class standard in scholarship and extra-curricular activities.

For the most part, we are occupied with our pursuit of knowledge. There are many of us who find the time to devote to school activities. With the return of the Pioneer, the members of the staff found a goodly number of the Junior E. E.'s at work with them. Our class also contributed several members to our up-and-coming Rifle Club. Needless to say, all activities were financially supported by the entire class in a whole-hearted manner.

We are not by any means sedate old men, but it seems that those frolicsome lads of a few years ago who delighted in chalk fights and the like, are now more or less subdued.

The bugaboos of the terrible Junior year past, we find the men imbued with a little bit of self satisfaction; an idea that, if you really get down to work, those courses were not so hard.

Part of our eager and hungry search for science has, for the present, been satisfied. We are tired after a year of arduous work but, as we will know, after a few weeks of relaxation, we shall all be eager to get back in the harness once again. With the goal of graduation before us, we shall be even more anxious to return to our classes after our summer vacation.

We would like to take this opportunity to express our appreciation to our instructors who, by their friendly and patient guidance, have assisted us in these past three years. We would also like to thank the administration for its efforts in revising the courses in order to better fit us for an engineering career and to enable us to successfully compete with graduates of other technical schools.

In our mind, this year has been for us, a year of transition. We have risen from our study of general science and have begun to concentrate upon our chosen field. Our course this year included certain hours which were a glimpse into the outside world—hours during which we were permitted to see just what an electrical engineer did, and furthermore to actually do these things ourselves. This has caused us to realize that we have passed the stage of dependency, and must now accept our place in the social world as men of character. With this end in mind we go forward into the fourth year, fully understanding the responsibilities accorded us.

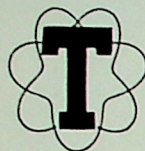




TOP ROW: C. NICHOLSBERG B. GROSSMAN J. SCULLY B. SCHENKER L. CARDENAS  
MIDDLE ROW: T. REYNOLDS R. GERHOLD H. DECKER J. A. WEBER J. SHAPIRO J. J. TRELLA A. SANDLER  
BOTTOM ROW: E. STODOLA H. TURKIN E. GOLUB A. TEITLER J. A. LeMAIRE M. POLLYEA



## CHEMICAL ENGINEERS CLASS OF 1936



THE CLASS OF 1936, we are at present. Some of us started as the class of 1935, or 1934, some of us will grace the pages of the 1936 Cable as the class of 1937; but for the moment we are the Chemical Engineering section of the class of 1936.

We have encountered boring teachers, interesting teachers; bullying teachers, meek teachers; old teachers, young teachers; teachers who piled on assignments, and teachers (very few of these) who gave few assignments. Still we hang on, inspired by a vision ahead. We gasp, "We are the class of 1936—and it is already 1935!"

Look us over—notice the rings under our eyes—as we step up and introduce ourselves. MAX AXLEROD—"Axy"—He's impudent and boisterous, but the sort of fellow who'll come in Saturday to get his lab. assignment done.

LOUIS CESALETI—A quiet fellow, with but one fault—he still giggles at Dr. Mantz's "humorous" mannerisms.

GEORGE COOPER—Old man caution. He'll never throw the wrong switch. He became a lifeguard one summer so he could pull himself in, in case of a cramp.

PHILIP DOWDEN—The handyman of the Chem. Department. He can be seen most any day, in that ankle-length lab. coat, nailing an exhibit for the Chem. Corridor.

HARRY HANKIN—The two-hundred pound-odd boy; still he manages to get more done than any two other fellows while toddling about the Phys. Chem. Lab. When Professor Coull paired the men off at the beginning of the year he failed to give Hankin a partner. Whether it was physical or mental stature that impressed him, he failed to say.

ROY V. HIGH—The V. stands for Valentine. He's characterized by an everlasting good nature. Unobtrusively, he manages to grab the best marks in Calculus.

EDWIN JUD—The nearest thing to an athlete in the class. He lives in Hollis, Queens, and his favorite expression is "How lovely!"

GEORGE KARNOFSKY—The class genius. He came to Cooper from Brooklyn College, and picked up a scholarship his first year here. While others wonder what in blazes that last instructor was talking about, George complains about not enough work.

EDWARD KISBANY—The fellow who's always complaining at the lack of a baseball team in Cooper. He was the most surprised man in the class the day he got the only hundred in the calculus exam.

JOSEPH MALTZ—"Evil-Puss"—Joe was news editor of the Pioneer until the day he found himself six Phys. Chem. Lab. Reports behind. P.S.—he quit the job. He eats in the Art School lunchroom—the bloomin' pansy!

HARRY ROSENBERG—"Rosie"—The most conscientious man in the class. Favorite subject: analytical chemistry. He devours books on it.

HYLAS SMITH—"Smitty"—of Flushing, Long Island. He looks like the baby of the class (though Maltz is younger). Hasn't shaved yet. With High and White, he shares the honor of being one of the most pleasant fellows in the class.

HAROLD SILVERS—The nonchalant gentleman of our class. This busy man is not only the A.A. representative and Pioneer agent of our class but he is also the secretary of the entire Junior Class.

HENRY G. STAATERMAN—Dr. Mantz's prize pupil. If he weren't around to translate those German passages the rest of the class would have to struggle through them—so we tender him a vote of thanks.

CHARLES STUMPP—"Charlie"—The class's idea of a "gentleman and a scholar." We all thought him a confirmed pacifist, until the day he joined the Rifle Team.

JAMES E. VAN HORN—"Van"—The class character. He comes from Staten Island; perhaps that explains his craze for swimming (the ferry must **occasionally** get stuck!) There have been scandalous rumors as to what the "E" stands for.

SIDNEY R. WEINSTEIN—One of the few New Yorkers in the class. He speaks German wit ha heccent. Likes Electrical Engineering as a subject, but complains of the way they "rush you through an experiment" in the E.E. Lab.

EDWIN WILHELMY—Scares ordinary mortals by peering down on them from six foot lord-knows-how-many-inches height. Just a wee bit indolent. Also is a stooge for Mr. Stumpp.

ROBERT WHITE—"Bob White"—Probably because of his curious name, Prof. Brumfield (that big brusque he-man of a Civil Engineer) has taken a liking to Robert. Bob consequently has an easy time in Mech. of Materials. In his spare time you can find him in the met. laboratory, fooling with the metallograph. Bob comes from Port Washington, Long Island, and is proud of it.

MORRIS WOLK—"Moisha"—Very quiet. His small size also makes him hard to locate. Morris wanted to be an E.E., but changed his mind.





TOP ROW: H. G. STAATERMAN L. GOLDMAN H. E. ROSENBERG  
MIDDLE ROW: C. E. LEYES E. J. JUD G. T. COOPER C. E. WILHELMY C. L. STUMPP C. B. MOTEJZIK J. MALTZ  
BOTTOM ROW: R. V. HIGH M. AXELROD G. KORNOFSKY R. WHITE H. W. SMITH L. F. GESALETTI P. R. DOWDEN





C. KIRBY  
President



J. SCHAEFER  
Vice-President

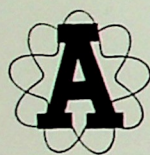


E. KUTZELMAN  
Secretary



G. GREEN  
Treasurer

## CLASS OF 1937



T the end of last year's exams, all of us of '37 left in high spirits and remained so until we received the marks. Some kept the smiles, but some did not; and now we as sophomores feel more sober about the school's aim and hope to be here in 1937 to appreciate it all. We sense that as juniors, with the goal of graduation much nearer, everyone will be more hopeful. No doubt the reason for the gloomy outlook is that most of the happy-go-lucky fellows are with us no more while the pessimists are always with us. Maybe the fellows have changed themselves. All in all the calls from Mr. Findley become more and more doleful.

This new year sees us split unevenly into the different branches of engineering, causing a little of the old comradeship to be replaced by a worthwhile sense of rivalry. The Ch.E.'s have taken the lions share of the class while the M.E.'s are, in comparison, a lost band wandering in the wilderness. Forty against ten.

Without the slightest doubt the new courses have given a lot of trouble. Not all of them but nearly all. German, except to those who knew it thoroughly beforehand, is the bugaboo of all. But this is balanced by the interest aroused in Dean Martin's newly instituted Social Philosophy Lectures. Or at least that's how most of us feel. The Sea of Bees shall never be forgotten. Some of the uninitiated still feel that the voluminous reports the E.E.'s kept preparing were not reports at all but, instead, the school's contribution of pet vituperatives and statistics to the Coughlin—Johnson—Long battle of the century. Yeh, the laboratory reports should be soft for them now.

Some of this year's courses have allowed us to get further insights into the character of some of the instructors we already knew. Prof. Meritt's uncanny moment of inertia machine that gave the same results for every test made us wish the lab. apparatus was like that. Some of Prof. Hauptman's smiles during his examinations were distracting to say the very least. At times we thought Huey Long was with us when Dean Martin threw up his arms and mentioned the Dictator of the Delta.

The class elections at the beginning of the year did not lead to any electioneering as Ken Ryan used in the freshmen class. Yet for two hectic sessions the vote seesawed back and forth until the issue was finally settled after



## T H E \* C A B L E \* O F \* 1 9 3 5

an hour and half of voting. During the battles everyone certainly had a good time. Then the class settled down and things went along in their usual path.

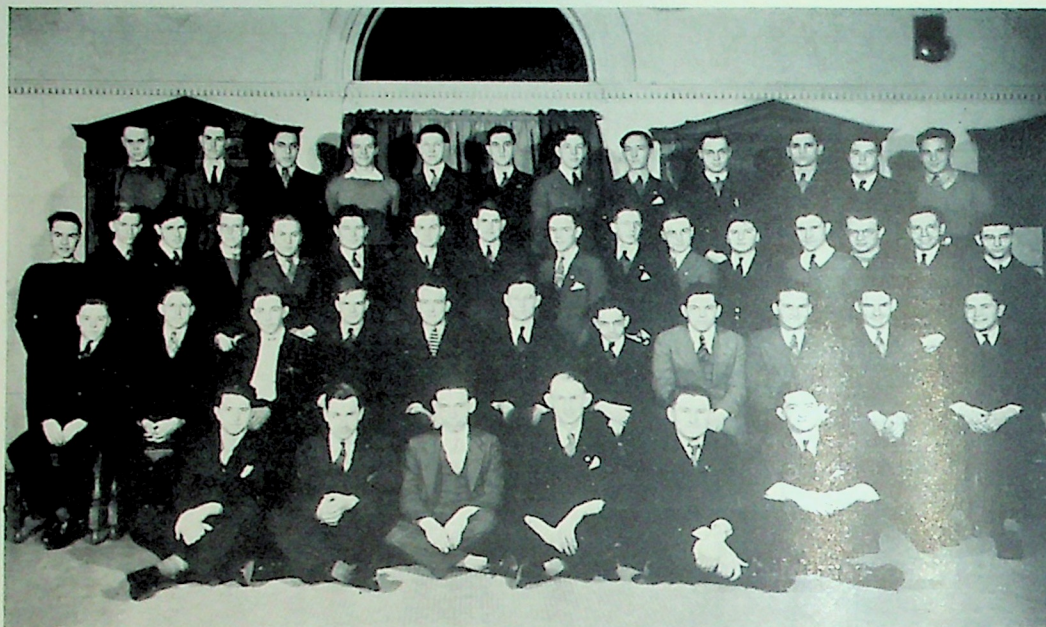
The class, as it did last year, supported the Athletic Association wholeheartedly. This year they did better in this respect than any other class in the school. The members saw the sport of water polo instituted with a number of hotly fought battles. The class team of wet hens clearly showed their superiority over the juniors in two spirited battles to cop the tournament without the loss of a game. In the Day-Night games, the class of '37 placed four out of five on the team and helped to beat the Night men after being held to a tie in the first game with the Night mermaids. Don't forget, the sport was always clean! The basketball team, the best yet, met some thoroughly heartbreaking defeats and as a result ended up near the cellar in the interclass tourney. The team, perhaps the flashiest in the tournament, won some tough outside games but couldn't seem to click in the tight spots. Next year it should take the other class teams in the tourney, also with the Blanket Fee in force, we hope, the class should get even more fun and good-fellowship out of the use of the gym and pool. The class has contributed its share of sharpshooters to the Rifle Club.

The Pioneer, published after a lapse of a year, has assisted greatly in securing the support of the class for water polo and basketball. Many members of the Pioneer staff are sophomores with more members in prospect for next year. Indeed the Cable precedent of having the managers from the Junior year was broken by having the Day Tech manager, Al Russo, from the class of '37. With all these activities the class should be loyal supporters for the Blanket Fee.

The time we have spent in Cooper Union has made us more fully realize just how big and worthwhile engineering really is. With the summer vacation just ahead of us and the outlook for jobs better than ever, we hope soon to be something more than just embryo "slip-stick" users.







## CLASS OF 1938

**W**E entered the Institute of Technology on September 25th, 1934, heaped in self esteem and as proud as the cat who had just earned her keep. They say, "Fifty Million Frenchmen can't be wrong," but surely one hundred freshmen can. We soon learned there was a destroyer prowling about the place. One which could trace its ancestry to those distinguished and formidable breeds, Analytical Geometry, Descriptive Geometry and Professor Sherman's lectures. It was a carnivorous animal that seemed to prefer the taste of wayward Freshmen to that of conscientious Freshmen. So some of us went our way.

Despite our experiences we had a good time with both the faculty and the students. The students supplied the fun. The brightlight of the Physics lectures was the time our lecturers played tug-of-war with the Magdenburg hemispheres.

Freddie Freshman copped a few laughs when he tried to ink his tracings from right to left, holding his pen backwards. Always clowning, he used to play soldier in the drawing-room digging trenches. Maybe he still does.

The Descriptive Geometry instructors looked very active when they demonstrated the intricacies of their subject. (We fear the stage has lost some fine contortionists.) Because misery loves company, we always enjoyed that look of insignificance which adorned the faces of our neighbors when Professor Sherman concluded one of his more complicated lectures. (Of course it was pie for some of us.)

In extra curricular activities, our class teams, if not successful, showed a great deal of spirit, by putting full-sized squads in all intramural tournaments. The class was well represented among Pioneer subscribers and in the Athletic association. It is interesting to note that the only reply the Cable received to a subscription blank published in the Pioneer was from this freshman class.

A Committee was formed to inaugurate a Freshman dance, but the financial condition of the class was found to be rather low.



## MATHEMATICS

**F**ROM the day Thales found that the Egyptian manuscript titled "The Secrets of all the Dark Things," was nothing but a manual of practical computations, to the present day when Einstein's prosaic theories speak of a magic fourth dimension, mathematics has taken great strides. Previous to this period, mathematical reasoning was subservient to man's knowledge of natural phenomena and his needs for picturing them.

The first mathematician crept out of his cave and somehow found a relation between objects about him and his digits. Naturally, according to his reasoning, computations could not go beyond the number of his fingers. Even now some aborigines never count further than two. Any greater amount is "many." After all, when two or three sabre-toothed tigers are pursuing you, one more or less would not make a great deal of difference, except in the primitive Liars Club. Think of how much stronger a story a six-fingered caveman could have told. If this method of counting is adapted by Huey Long you who have three dollars will be as rich as Rockefeller, for anything over two is "many" dollars.

Gradually, man found it necessary to increase the range of his computations. With the accumulation of private property and the necessities of trade came the introduction of calculi. These were pebbles and the manner of their use is quite evident. The total of France's debt to the United States today would require tons of pebbles. The next step was to "abaci," which were extremely popular in China. Today they are mere children's toys. In certain sections of the world, a system of knotted cords was used.

As man began to record his thoughts, he found it necessary to use symbols for numbers. Some of us may remember the difficulties we had in grammar school in adding and subtracting Roman Numbers. The Arabians are credited with the origin of the modern system. Apparently the sheiks were engaged in other business beside stealing into tents by night as the songwriters would have us believe. The Arabians did much to aid the progress of mathematics.



Next on the scene came the Greeks who left the practical computations behind them and soared into the realms of theoretical mathematics. When Greek Philosopher met Greek Philosopher they argued over theorems and axioms, all as mysterious to the layman as the contents of a Greek salad. Different schools sprang up, each basing their theories on assumptions they thought logical until a new idea came forth. From this maze of mathematical lore issues the science as it is known today and which is responsible for the development of modern Physics and





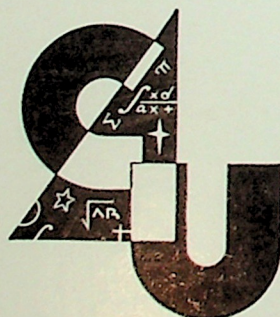
Chemistry. We can, therefore, thank the Greeks for such wonders as radios, automobiles, airplanes and the cafeteria around the corner.

Other nations were not far behind in the march of mathematics. Further advancement was aided by a new means of calculating. Logarithms were invented by John Napier, an Englishman, who spent 25 years in computing the tables that are still used today. The time element is, no doubt, the reason that the "weaker sex" never was prominent in the fields of mathematics. No woman would devote 25 years of her life to the pursuit of a number, aside from trying to convince others she was no older than that.

In the game of mathematics there has always been as many Hoyle's as players. We generally accept the rules of the Arabs, Euclid, Newton and others as being correct. This is because their rules work so well in so many cases and enable us to do most of the tricks that are called for in mathematical reasoning. Do not infer from this that all axioms, or rules, are incorrect, that apparently contradict those which we are taught. The only dictate common to all mathematical systems is consistency. There have been many ambitious mathematicians who have worked out systems that at first reading resemble Gertrude Stein's ramblings. The two works are alike in that they are both difficult to comprehend but drastically different in that the mathematician's work is consistent and conclusive.

Mathematics and the clear-cut reasoning necessary to the understanding of it, is distasteful to many. This is only because they have not taken the time to thoroughly uncover the elements of the subject and therefore despair when they cannot grasp a symbolic expression for a very obvious fact. It is like trying to enjoy an orange by biting through the peel.

There are many who have taken the time to remove the peel and today mathematics goes forward steadily, until someone discovers some new theorem that will cause scientists to discard all that is known and start anew. In any case, there is always something new to inflict upon tortured students.



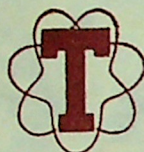




THE ART SCHOOL



# Rene Descartes



HE dissected bodies of dogs and cats were scattered profusely about his luxuriously furnished rooms. Pointing to the cadavers, Descartes said to his friend, "These are my books"; all humanity was his book too, as he figuratively dissected every action and every thought of those around him.

A rumor of an unusual natural phenomena would send him flying to investigate; even though it were to the ends of the earth. His life was extremely nomadic. He was born in France but died in Sweden. He succeeded in visiting practically every nation in Western Europe. Descartes' schooling was obtained in a Jesuit Institution. He was contemptuous of the authority of tradition and of his teachers, for by long studies of things around him, he found errors in all books he read.

When Descartes left school, he took lessons in horsemanship and fencing. This was the beginning of a life of pleasure in Paris. Even then, this city carried a reputation for wickedness. Fortunately for the furtherance of human knowledge, Descartes' vices went no further than gambling. This vice was abandoned when he met Claude Mydorge, a great French mathematician. Descartes found their discussions so interesting, that he went into seclusion to make his own investigations. He lived like a hermit until friends who now missed his good cheer accidentally discovered him. They again plunged him into the social whirl.

During the year 1617, Descartes found the Parisian politics too turbulent for a student and he went to the Netherlands as a volunteer in the army of Prince Maurice of Orange. The first and only pay he received was kept as a souvenir and curiosity for the rest of his life. Two years later he was fighting in the Bavarian army. He followed this with a peaceful tour of Europe only to end in the French army.

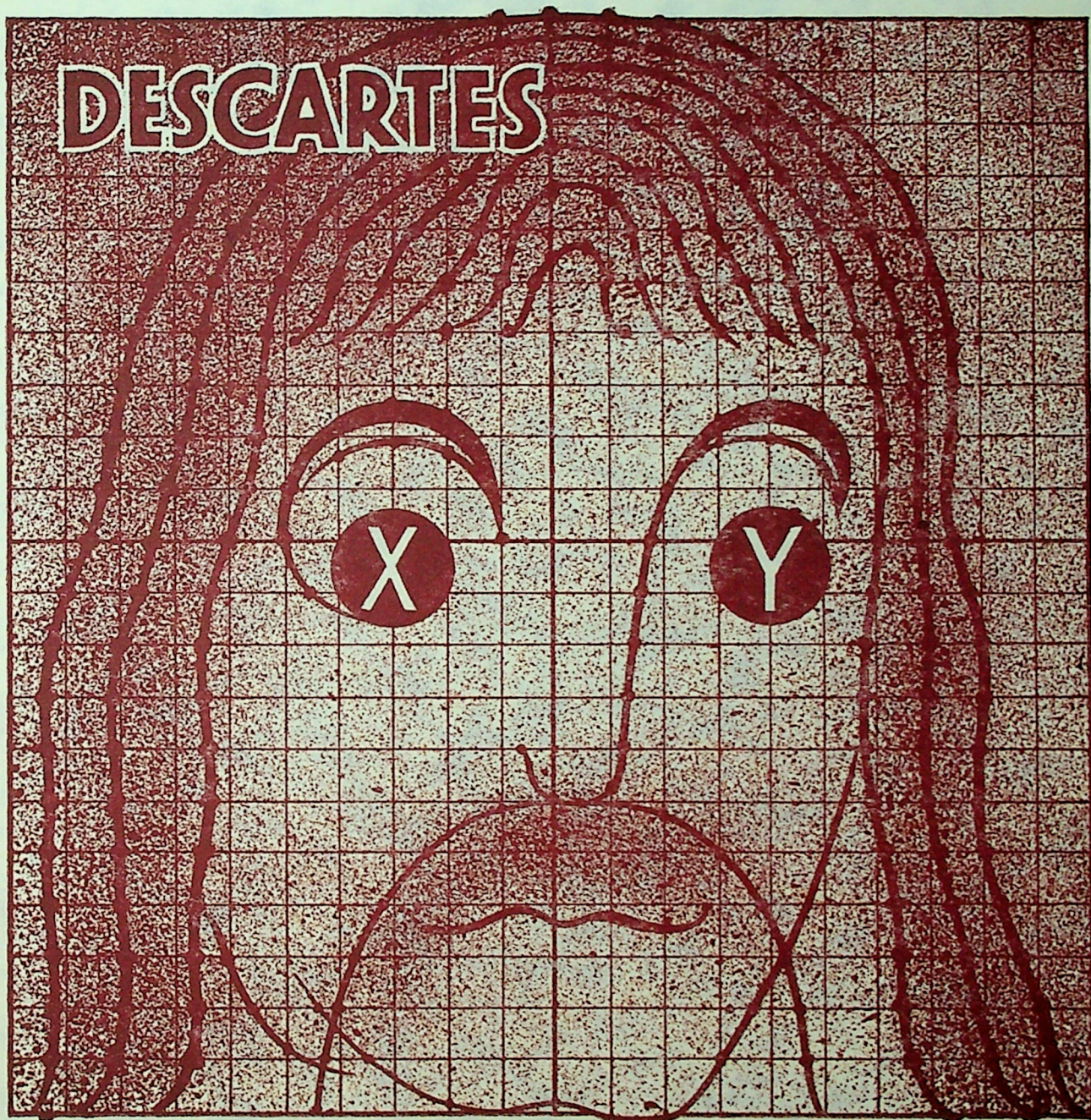
All through his eventful life, at no time could he be called an actor on the stage of the world. Always he was a spectator. When he entered the service of the army it was merely to observe the humans who risked their lives in battle. Everything he did was only to prove tenets. Though Descartes served in many wars, he never took sides in politics. His best friend and correspondent was Princess Elizabeth of the Netherlands, yet she was the daughter of the King against whom he fought.

Descartes' friends were from all levels. When his philosophy was attacked, he was summoned to court in Holland to answer charges of irreligion and slander. He called upon the French Ambassador and the Prince of Orange to protect him and he was freed. His correspondence with Queen Christina is famous. In 1649, she invited him to her court. The Queen was not yet 20 and took a lively and somewhat whimsical interest in philosophical and literary culture. She wanted Descartes to draw up a Code for a proposed Academy of Sciences and to give her an hour of philosophical instruction every morning at the strange hour of five o'clock. She had decided to make him a noble and invest him with properties but it was needless planning. Just as he completed the Code, Descartes died of pneumonia.

Though he is best known today for his mathematical discoveries, his contemporaries were more interested in his philosophy. For a long time after his death, there were a great many followers of his doctrines. He is credited with a great many discoveries in physiology and physics.



# DESCARTES











AUSTIN PURVES, JR.  
Art Director



ESMOND SHAW  
Supervisor, Night Art School

## ART SCHOOL

AUSTIN PURVES, Jr., Art Director

Mr. Purves holds quite a few well known designs to his credit, among these being the decoration of the stairwell to Mr. Otto Kahn's private swimming pool in Long Island, and the decorations for the Folger Shakespeare Memorial Library in Washington. He was born in Philadelphia, and graduated from the Germantown Friends School located there. He continued his studies at the Pennsylvania Academy of Fine Arts, and later received instruction at Paris and Fontainebleau, France. The finer education he received abroad is evinced by the outstanding work that carries his name. A large portion of his education, however, was self gathered in his own work-shop. He is at present devoting all of his time and energy to the development and extension of the art and architectural studies offered here. The innovation in the teaching of the first year preparatory class is due to his careful planning and knowledge of the requirements of a sound foundation for art students. His commercial experience includes a period as color superintendent for a decorative painting company, the organization of a department of design for R. H. Macy & Co. and sundry private commissions. He has taught at the Pennsylvania Museum and School of Industrial Art, the Yale School of Fine Arts and the National Academy of Design, before becoming Art Director at Cooper Union, in July, 1931. He is a member of the Architectural League of New York, the Coffee House, Century Association and National Society of Mural Painters.

ESMOND SHAW, Supervisor, Night Art School

Mr. Shaw first saw light in the West Indies, but the stormy waters that surround these Isles by no means held this roving student. He received his primary education from a Dominican tutor, and later sailed for England, where he graduated from the Bedford Grammar School. His next scholastic move was a long journey to Polo, Illinois, to attend another school, and later became a matriculated student in Kings College School, Windsor, Nova Scotia. From here it was but a step to McGill University, Montreal, Quebec. He did not consider his education complete until he finally joined the Art Students League in New York. It is not to be thought that all his knowledge has been gained in schools. He has been employed by several architectural firms here in New York, since 1923. Although Mr. Shaw holds the title of Supervisor of the Night Art School he is only 33 years old and his membership on the Cooper Union staff only dates back to 1932.



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DEPARTMENT FACULTY

PREPARATORY YEAR

C. DALE BADGELEY

ESMOND SHAW

BENJAMIN K. WYATT

SECOND YEAR

EDWIN A. ACKER

ADRIEN L. BEINEIX ✓

VESPUCCI PETRONE\* ✓

THIRD AND FOURTH YEAR CONSTRUCTION

GEORGE H. FERRENZ

HAROLD M. HEATLEY

THOMAS E. McMULLIN ✓

THIRD AND FOURTH YEAR DESIGN

BRUCE RABENOLD

FRANCIS W. ROUDEBUSH

ESTIMATING, SHADES and SHADOWS, PERSPECTIVE

SAMUEL ENTWISTLE

ROBERT HUTCHINS

THOMAS E. McMULLIN ✓

CASPER P. COLLA ✓

VESPUCCI PETRONE\* ✓

LECTURERS

CASPER P. COLLA ✓

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\*On Leave of Absence 1935, ADOLPH L. MULLER, substitute.



## ART DEPARTMENT FACULTY

GAETANO CECERE

Modeling

ROBERT S. HUTCHINS

Perspective

CARLO CIAMPAGLIA ✓

Drawing

DAVID HYMES

Advertising Design

LEWIS DANIEL

Drawing and Modeling

HENRY MAYER

Drawing

PAUL FEELEY

Drawing

ALVIN MEYER ✓

Drawing

CLEMENS FINLEY ✓

Drawing

CONSTANCE REED ✓

Fashion Illustration

CHARLES GILBERT ✓

Drawing

ESMOND SHAW

Supervisor

HENRY A. GOLDSMITH

Furniture Design and Interior  
Architecture

ANATOL SHULKIN

Drawing

WALLACE HARRISON

Drawing

W. E. B. STARKWEATHER ✓

Drawing

BYRON THOMAS

Drawing



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ARCHITECTURE  
DEPARTMENT

THE NIGHT  
ART SCHOOL





HAROLD M. HEATLEY  
Instructor

## ARCHITECTURE



ARCHITECTURE is the most ancient of the arts and has been practiced continuously from primitive to modern times. In all the ages it has been honored and its practitioners held in esteem. It has always been taken for granted that all building should be dignified and beautiful, according to the style and manner of the time, utility and beauty being both essential and integral with the structure.

Architecture, then, is almost equally an art and a science and through it have been developed many of our modern arts and sciences in this and related fields. Painting and sculpture, for example, were first used in the ornamentation of buildings, while engineering has resulted principally from the scientific study of the materials and forces employed in construction. A good draftsman is familiar with these principles and trains himself accordingly.

Architectural drawing, as a representation of architecture, ranges from the plainest and most practical working drawings to the pictorial or engraver's art.

In geometrical drawing, such as architectural construction requires, two conditions must be met in that the drawings must be absolutely accurate and complete, and entirely clear as to intention. The draftsman must provide drawings from which the building may be constructed as intended by the architect, and a complete knowledge of construction methods and materials must be had to show what is required.

Drawings made to produce impressions of architectural ideas must be considered as requiring less of the practical and more of the artistic for pleasing presentations.

Whether practical or pictorial, skill is of the utmost value—a natural aptitude plus development and determination. Deftness in delineation may then be cultivated to a degree of perfection.

To serve efficiently, the draftsman should know, or at least be able to intelligently organize and criticize, construction and design in foundations, wood framing, steel and reinforced concrete work, plumbing, heating, ventilating, electrical, elevator, refrigerating and air-conditioning plants, and all other materials and devices of some 50 trades used in buildings. He must know, or ascertain



at need, all the conditions and requirements of every different type of building. After entering into the spirit of the work and realizing the practical needs economically as to space, materials and construction, as well as investing all the forms with beauty, he embodies all in complete working drawings and specifications on the basis of which the contract is signed with a builder, selected usually by competitive bidding. During the execution of the work he may be called upon to act as the agent of the architect and the owner in supervision and in interpreting the drawings and specifications. This highly technical and artistic service continues until the completion of the building and frequently includes its furnishings and landscaping.

To give the student preparing for this many-sided vocation much of the desired knowledge, taste and culture, are the objectives of this course.

All the problems and subjects, about evenly divided between architecture as an art and science, are planned to develop the student harmoniously, so that as a draftsman he shall have an appreciation of good design and the ability to handle architectural forms, with a firm grasp of structural considerations and details.

This material forms a basis for the divisions of elements, construction, and design, which form the main part of the distinctly architectural training. Origin and development of materials, forms and ornament are therefore described; principles of composition in plan and elevation are made clear and the significance of these further augmented by reference to the photographs, plates, and pages of the periodicals. At the same time the artistic possibilities of the various materials used in the structure and decoration and their craftsmanship as affecting their form and harmonious combination, are carefully considered.

Good architecture must be based on sound practice, however, and a large place is given to the sciences, the properties and strengths of materials as used in buildings, and their technical, practical and artistic applications. The methods of embodying these requirements in drawings and specifications are also treated. The subjects of construction methods and equipments, mechanical and electrical equipment and installation, contracts, supervision, financing, laws and codes, and office practice are taken up by means of lecture courses.

The instructors for the work in the various years are all highly experienced men in their respective fields of endeavor. The majority are registered architects in active practice and prominent in professional, civic or scholastic circles. All have had excellent training and office practice and there are Rome Prize and Scholarship winners among them.

The courses offered in this department are as set forth in the Night Art School bulletin with the exception of the first year. This fall all those who entered the school underwent a new type of training and instruction as part of a gradual change in the work of all departments.

The preparatory year, as it is known, has as its aim the general fundamentals of all design as practiced in the three arts of Architecture, Painting and Sculpture. Through such training it is hoped to achieve a closer relationship and an essential understanding among the students of any one of the three arts in regard to the viewpoints and problems of the other two, at the same time teaching to everyone the principles of proportion and composition in plan and elevation. Not only is the subject matter represented in line and color, but in the third dimension as well, giving the students a clearer and firmer grasp of fundamental phases of the work. A big advantage to the student in the preparatory year is that it affords a better and surer choice of his later studies, either from his own deductions or under the helpful advice and guidance of an instructor.



## ON MATHEMATICS

"Mathematics—is the thing most native to the modern temper . . . Ours is pre-eminently the age of mathematics; it is the one subject that is universally taught; it has given us our control of natural forces; it is the magician's wand, without which, our workers of magic, be they bankers, engineers, physicists, inventors, could not perform their tricks. Of course, this is nothing new: mathematics has long been made to serve man's uses, but never so universally and so successfully as now, threatening to swallow all other knowledges as fast as they assume organized form. Moreover, since the advent of non-Euclidian geometry the field of mathematics has been enlarged, enriched, and, by reason of the theory of relativity, popularized: space-time, curved space, the fourth dimension having become catchwords. In brief, the modern mind is definitely centered on invention and discovery, of which mathematics is the guiding light."

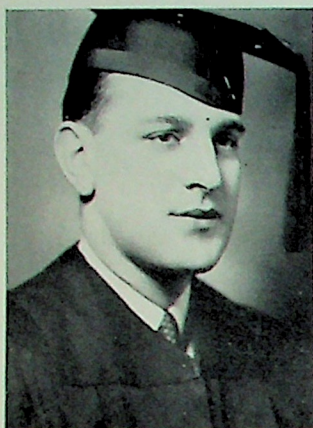
—From "The Frozen Fountain"—By Claude Bragdon



# SENIOR CLASSES

ARCHITECTURE  
DEPARTMENT





**ALFRED ANASTASIA**

"Al"

**Architecture**

Manual Training High School.  
Captain and Manager Foot-  
ball.



**A. L. APATOV**

"Apples"

**Architecture**

New Lots Evening High  
School.  
1934-35 Class Treas.



**BENJAMIN ASNIN**

"Ben"

**Architecture**

Boys' High School.  
Section Pres. '34.

**JOE BERTUCCI**

"Joe"

**Architecture**

Vocational High School.  
1932-33 Soph. Hop Com.;  
1933-34 Sect. Treas.

**FREDERICK T. BOCK**

"Fritz"

**Architecture**

Brooklyn Technical High  
School.  
1932-33 Class Vice-Pres.;  
1933-34 Class Treas.

**NATHAN BRODY**

"Steve"

**Architecture**

East Side Evening High  
School.  
1933-34 Class Sec.





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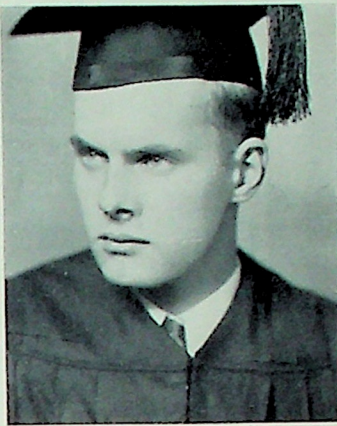


**JULIUS COHEN**

"Julie"

**Architecture**

Mu Omicron Delta.  
N.Y.U.; C.C.N.Y.; Stuyvesant  
High School.  
1933-34 Honorary Mention;  
Class Pres.; Junior Prom  
Com.



**FRANK J. DARWAS**

"Frankie"

**Architecture**

James Monroe High School.  
1933-34 Second Prize.



**DAVID J. R. de la PARRA**

"Dave"

**Architecture**

Worcester Commerce High  
School, Worcester, Mass.  
1932-33 Football; Major "C";  
Soph. Dance Com.;  
1933-34 Section Vice-Pres.

**GEORGE W. FREEMAN, Jr.**

"Bing"

**Architecture**

East Side High School.  
1931-32 Class Treas.;  
1932-33 Dance Com.;  
1933-34 Junior Prom. Com.;  
Swimming Team.

**FRANK GORDON**

"Frank"

**Architecture**

Morris High School.

**HAROLD HESSELSON**

**Architecture**

Alpha Kappa Delta.  
Haaren Hall High School.  
1933-34 Class Sec.; Prom En-  
tertainment Com.; Cable  
Agent;  
1934-35 Class Sec. and Treas.;  
Prom Com.; Cable Agent;  
Pioneer Agent.







L. ALBERT LEE

"Al"

Architecture

Annapolis High School; Columbia University.  
1932-33 First Mention;  
1933-34 Arch Editor Cable.



HYMAN LEIBOWITZ

"Hi"

Architecture

Kappa Delta Omega.  
1934-35 Class Pres.



HERMAN B. LEVITZ

"Herb"

Architecture

Brooklyn Technical High School.  
Lambda Sigma Kappa.  
1932-33 Sect. Treas.; Soph. Hop Com.;  
1933-34 Junior Prom. Com.; Annual Dance Com.; Arch. Cir. M'g'r. Cable;  
1934-35 Senior Hop Com.; Pioneer News Staff; Annual Dance Com.

MICHAEL A. LISINICCHIA

"Mickey"

Architecture

Lambda Sigma Kappa.  
Stuyvesant High School.  
1932-33 Class Vice-President; Dance Committee;  
1933-34 Class Vice-President; Dance Committee; Sec'y.  
Arch. Student Council, Class Key Committee;  
1934-35 Pioneer Arch. Circulation Mgr.; Annual Committee; Class Vice-President.  
Member of Junior Chapter N. Y. S. A.

OTTO MARKARD

"Otto"

Architecture

LOUIS C. MORARD

"Lou"

Architecture

Cooper Junior High School.  
1933-34 Honorary Mention.





# T H E \* C A B L E \* O F \* 1 9 3 5



**HAROLD M. NACHMAN**  
"Nachie"  
Architecture  
Creston Junior High School.



**SAMUEL MARTIN NOBLE**  
"Marty"  
Architecture  
Lambda Sigma Kappa.  
De Witt Clinton High School.  
1932-33 Chairman Soph. Hop.,  
1933-34 Class Pres.; Vice-  
Pres. Arch. Student Coun-  
cil; Chairman Entertainment  
Com. Junior Prom.;  
1934-35 General Student  
Council; Arch. Editor Pi-  
oneer; Senior Dance Com.;  
Chairman Night Annual



**JOSEPH PALMERI**  
"Joe"  
Architecture  
Passaic High School.

**WILLIAM ROCCA**  
"Bill"  
Architecture

1933-34 Class Treas.; Cable  
Rep. Junior Prom.; Honor-  
able Mention.

**DAVID ROSENTHAL**  
"Dave"  
Architecture

Thomas Jefferson High School.

**JOSEPH RUSSO**  
"Joe"  
Architecture

Murray Hill High School.







**NORMAN G. SCHEPPER**  
"Norm"  
**Architecture**

Haaren High School.  
1933-34 Honorable Mention.



**NATHAN A. SEIDERMAN**  
"Russia"  
**Architecture**

Brooklyn Technical High  
School; Miami High School,  
Miami, Florida.



**EDWARD SINDELAR**  
"Ed"  
**Architecture**

Stuyvesant High School.

**JAMES SZALOCZI**  
"Jimmy"  
**Architecture**

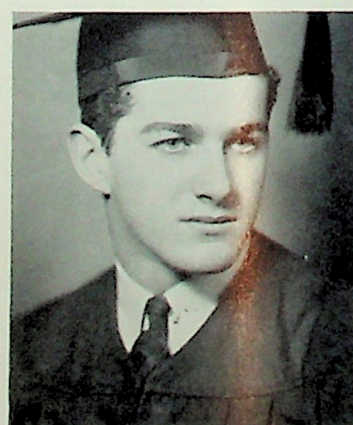
Stuyvesant High School.  
1931-32 Cooper Union Orches-  
tra;  
1932-33 Cooper Union Orches-  
tra.

**DOMINICK TESORIERO**  
"Dick"  
**Architecture**

Hebrew Technical Institute.

**ARTHUR A. TOMASH**  
"Artie"  
**Architecture**

Brooklyn Technical High  
School; Stelton Normal Prep.  
1932-33 Baseball;  
1933-34 Baseball;  
1933-34 First Mention.





# THE \* C A B L E \* O F \* 1 9 3 5

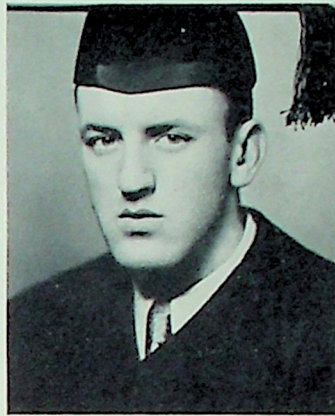


**HENRY G. WACKER**

"Waxey"

**Architecture**

Bushwick High School.  
1931-32 Class Pres.; Honorable  
Mention;  
1932-33 Class Vice-Pres.; Hon-  
orable Mention;  
1933-34 Class Sec'y; Honor-  
able Mention;  
1934-35 Class Treas.



**HAROLD L. WETER**

"Hal"

**Architecture**

Iota Gamma Phi.  
Jamaica High School.  
1931-32 Honorable Mention;  
1932-1933 Soph. Hop Com.;  
1933-34 First Prize;  
1934-35 Class Sec'y and  
Treas.; Cable Rep.



**MILTON ZELLERMAYER**

"Milt"

**Architecture**

Morris High School; C.C.N.Y.  
1934-35 Section Pres.

**JOHN MCGOWAN**

"Mac"

**Architecture**

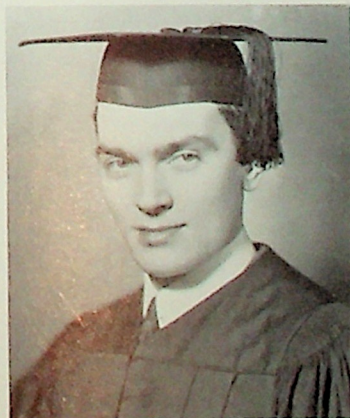
Class Representative.  
Honorable Mention.

**GUSTAVE L. ROMOND**

"Gus"

**Architecture**

Linden High School.  
Honorable Mention '31, '32;  
First Prize '33.





"Do not imagine that mathematics is hard and crabbed and repulsive to common sense. It is merely the etherealization of common sense."

LORD KELVIN



JUNIOR CLASSES

DEPARTMENT  
ARCHITECTURE





**JOHN A. ABBATE**

"Johnnie"

**Architecture**

Neatness, is best descriptive of Johnnie's class-work. His technique is far above average which accounts for the Honorable Mentions he has received. John speaks loudly but vociferous as he is, he possesses that characteristic which is symbolic of a true friend—Sincerity.



**NICHOLAS C. APOSTOLOU**

"Apollo"

**Architecture**

Lambda Sigma Kappa

Brooklyn Technical High School

1933-34 Section Treasurer

1934-35 Arch. Circ. Manager Cable

Always living up to the traditions of the famed Greek orators, "Nick" now carries the torch of his forebears, emblematic of his Cable salesmanship. Though slight in stature, stout of heart and glib of tongue, he prides himself in his untiring quest for mirth and merriment. "Long may ye be successful, O noble son of Zeus."



**SAMUEL AUERBACH**

"Junior"

**Architecture**

Thomas Jefferson High School

Serious(ly) Sam is not so bad. His kidding gives many a good laugh to the fellows who appreciate his humor and friendship. He has a passionate interest in architecture and blondes.



**FERDINAND BELLO**

"Fred"

**Architecture**

Vocational High School; New York Evening High School; C.C.N.Y.

1933-34 Class Secretary

Honorable Mention in '34, C.U.A.A.

Fred is one of the very few men in C. U. who mixes study with athletics. Maybe it should be the other way around. But let it go. He excels in athletics, yet is an A-1 scholar. Yes, sir! His brilliant personality has welded more than one lasting friendship.



**FRANK BLAHA, Jr.**

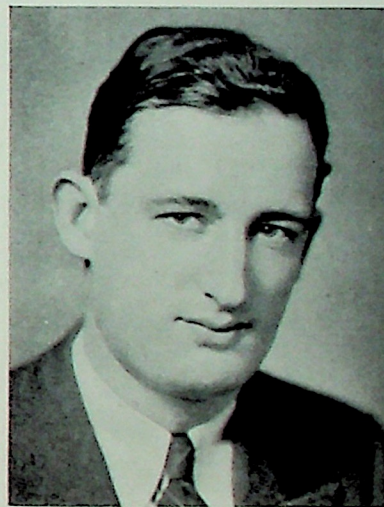
"Frank"

**Architecture**

Murray Hill Vocational; Mechanics Institute; Institute of Machine Design.

1933-34 Section Pres.; Hon. Mention.

Quiet, modest, and unassuming, Frank is one of our better students. He came to Cooper Union with a wealth of practical experience behind him. However, he bore the burden of his knowledge with an unaffected air which gained him the respect of his classmates. Frank is always willingly helpful and quietly efficient in his classwork. We look to Frank for bigger and better skyscrapers.



**ALFRED CORUZZI**

"Al"

**Architecture**

Stuyvesant High School  
Architectural Club

Al while being ambitious and studious and seriously preparing for a successful future in the Architectural field, possesses a sense of humor that makes him likeable. With his natural love for drawing, he is well prepared to storm the heights of success.







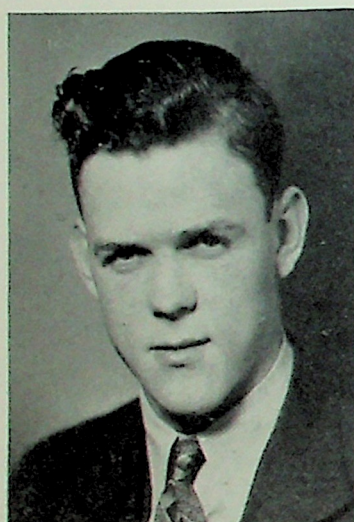
**ARTHUR J. CRIMMINS**

"Artie"

**Architecture**

Dickinson High School

Jolly good fellow, by jove, but, he lives in New Jersey. It seems all the jolly boys live there. So, we guess it's safe to say it is a jolly old place. However, let us not get away from the subject of Arthur J. and what a bright and hard working gentleman he is. He conducts his scholastic and social affairs to the satisfaction of his fellow students and, he appears as quickly as he disappears. But that's Arthur. Now you see him, now you don't.

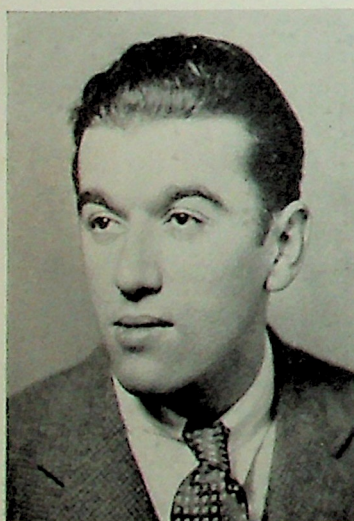


**GERALD F. DALTON**

"Gerry"

**Architecture**

He strokes with his brush with the greatest of ease. That's "Gerry". He doesn't smoke, he doesn't chew and he doesn't go out—much. He appreciates humor and he'll listen intently to a good fish story. But, by golly if you unwind a fairy tale he will not stand for it. It's a fish story or nothing.



**BERNARD DiPAOLA**

"Benny"

**Architecture**

Not satisfied with two first prizes in as many competitions, "Benny" wants still more fan mail. A person with such aspirations is bound to succeed. Our only hope is that we are nearby when he does. We're rooting for you, "Benny".



**MARGARET DRAKE**

"Peg"

**Architecture**

College of St. Elizabeth;  
Teachers College, Columbia University  
1934-35 Secretary of Section  
First Mention Freehand Drawing  
Honorable Mention 1st and 2nd years

Listen Men! The only girl in the school of architecture. A typical hard-working and persevering student. We used to wonder at the stupendous amount of work she did until we found out she was a school teacher. That explains it all. The personification of modesty and intelligence. Has ideas of her own but will listen to anyone's opinion. Her only vice is laughing at bad "gags."



**MAC C. ELBAUM**

"Mac"

**Architecture**

Stuyvesant High School

Has fertile ideas, fine initiative, fascinating plans, farsightedness, and is a forthcoming architect endowed with fortitude and fraternalism. Good luck for future fortune.



**JOSEPH FARLEY**

"Joe"

**Architecture**

1933-34 Section President

Joe is a go-getter. A namesake of his asked him from what side of the Farleys he sprang from. His response:

"We don't spring from any side we spring at 'em." This doggedness to attack things gives Joe a yearning to advance. He's amiable, regular and a willing helper. Co-operates with everyone. Gets along with everyone. Good work! Good boy!







**SOL FRIEDMAN**

**Architecture**

Stuyvesant High School  
2nd Mention Freehand Drawing  
Honorable Mention First Year Drafting  
2nd Mention 2nd Year

Sol is a fellow who goes about his work in a quiet way and gets it done. He is a hard worker and capable of leadership and accepts responsibility willingly. Always ready to help his fellow students in their darkened moments. He has the combined talent of leadership and willingness to help and is bound to succeed in his chosen profession.



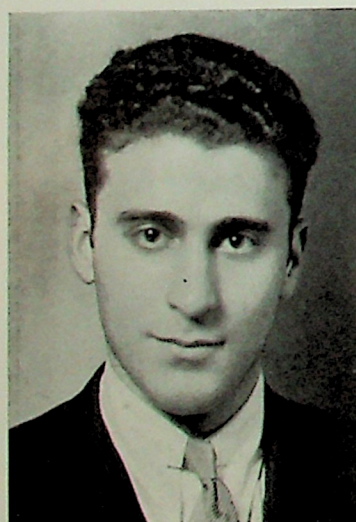
**SAM GULKO**

**"Float"**

**Architecture**

Woodward High School, Toledo, Ohio  
Toledo Museum of Art  
Morris High School, N. Y.  
N. Y. U.  
1933-34 2nd honorable mention  
1934-35 Section President  
C.U.A.A.

Sam is studying Architecture at Cooper Union to add to an already enviable background of art education. The boy is good, though next to the youngest in the class. His weekly salary looks like the reading on a fever thermometer. An exponent of sound, sensible architecture. He has applied his theories to his work, which he claims he does at home. Sam cannot concentrate in school, neither can the students in the near vicinity. He is the proud possessor of the St. Gaudens medal for Fine Draughtsmanship and more honors are on the way. Here is a specimen of success.



**EDWARD A. HANPASHIAN**

**"Sarge"**

**Architecture**

Stuyvesant High School  
1933-34 3rd place, Section Treasurer

"Sarge" is a very quiet fellow and never enters any school activities. His hobby is music and his two ambitions are, first to be an architect, and second, to command the National Guard.

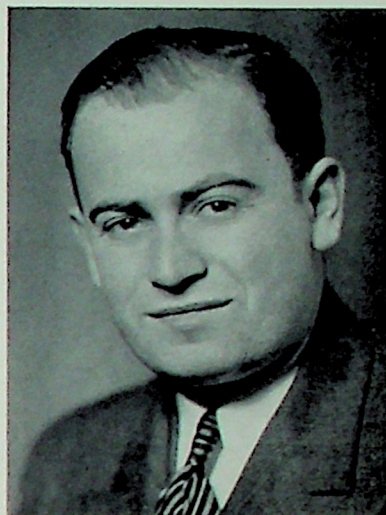


**BERNARD HEFFAN**

"Bernie"

**Architecture**

In "Bernie" we find the student who is constantly in quest of ideal perfection. We hope he accomplishes idealism as well as he does his class work. Diligent is poorly descriptive of Bernard's work-output. We prophesy for his future a success which he thoroughly deserves.

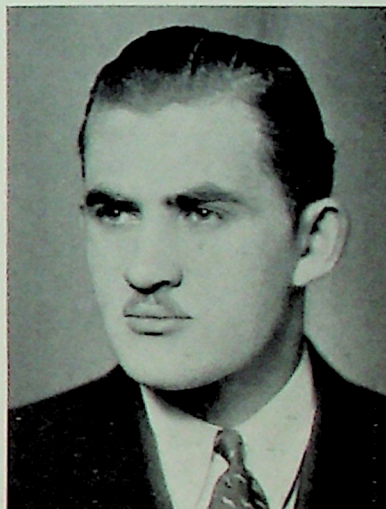


**SAMUEL HUBERMAN**

"Huby"

**Architecture**

Huby makes the following statement, "I am taking up the study of Architecture because I find it interesting and I like it very much. Some day I hope to be successful as an Architect. It is my ambition. Music and dancing are my diversions."



**GEORGE INGRAM**

"George"

**Architecture**

Serious? There is only one fellow who is more serious than George, but we haven't met him yet. George is quiet and reserved, he talks only when necessary, and rarely voices his opinion, but when he does, he is concise and explicit.







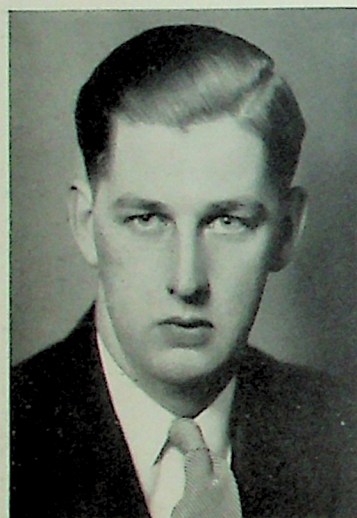
**ERIC BABER ISAACS**

"Corporal Isaacs"

**Architecture**

St. Georges College, Florida; St. Vincent's Grammar School, Cambridge, England

The corporal is the son of an engineer and architect. Indubitably he inherited some talent because we have seen his work. He is an ardent lover of the classic and modern architecture. With the zest and zeal he shows he can't fail. Keep your eyes peeled for his name in the future.



**WILLIAM JENSEN**

"Bill"

**Architecture**

We can say this much for Bill: Sincerity is evident in his characteristic jovial manner. Shakespeare was an amateur in comparison to Bill when puns are a subject of controversy. Nevertheless, this does not interfere with his class work which is the recipient of his undivided attention whenever he is seen in a studious mood. When the years will have rolled by and our hairs are gray, we will associate the name "Bill" with that of Tripp and smile at laughs that were administered by unintentional puns.



**ARTHUR W. JENSKY**

"Artie"

**Architecture**

Fate, cannot we fathom thee? What hast thou in store for our good friend "Artie"? Canst thou answer? You say you do not know. But, he's such a neat and gentle fellow. He has a good sense of reason, and so smooth in speech. Ah! You say he is going to succeed? Fate, I'm sure our friend is thankful.

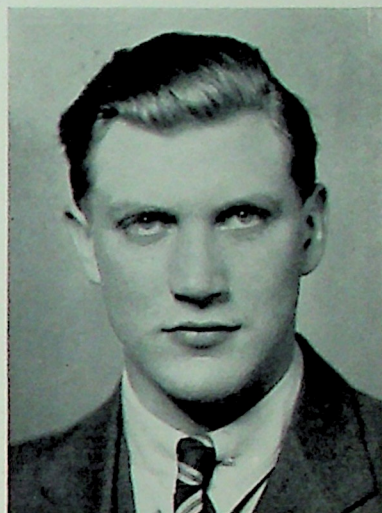


**ROBERT H. KOCH**

"Bob"

**Architecture**

"Bob" learned three things at Cooper Union: how to design houses; how to cut classes; and how to drink McSorelys ale and still walk a straight line. "Bob" is a little vociferous in speech but it's his way of emphasizing the important phrases. His school work ranks with the best.



**FRANK R. LoBUE**

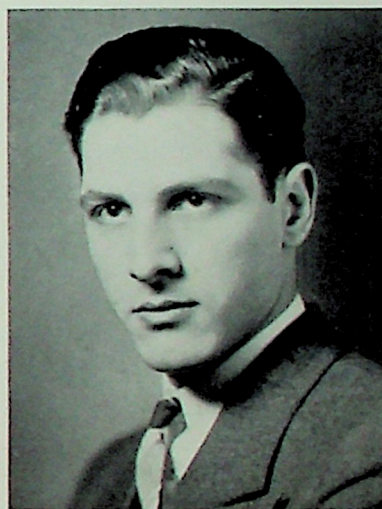
"Frank"

**Architecture**

Lambda Sigma Kappa  
Stuyvesant High School

1933 Class Sec'y; 1934 Sect. Pres.

Frank is a fine and 'ansome chap if there ever was one. He reminds us of Lord Byron. Byron wrote poetry. "Frank" recites it. You want to be careful because he's apt to get philosophical and pour the woes and cares of the Universe upon you. One is inclined to like him upon first meeting, for he is easy to get along with.



**JOSEPH F. McDONOUGH**

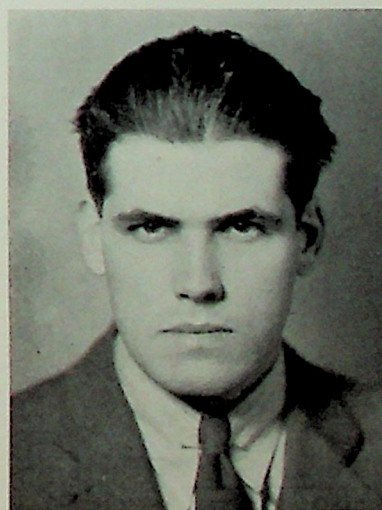
"Joe"

**Architecture**

Lambda Sigma Kappa  
1933-34 Class Treasurer

"Be there a finer lad in the school and ye be showing him to me."

He seeks them here  
He seeks them there.  
Those debtors,  
He seeks them everywhere.  
Why do they evade him  
Why do they run,  
He's the treasurer—  
The son-of-a-gun.







**LOUIS A. MERLETTO**

"Lou"

**Architecture**

Memorial H. S. of West New York, N. J.  
1932-33-34 Hon. Mention.

He can design buildings; he can play billiards and he is fond of the fair sex. Above all, he is ambitious. What more! And can he dance? Waltz, Lindy Hop, Westchester, Ballroom dancing and any step you choose will be danced with elegance and poise. "Lou" has no difficulty in doing things, and with his ability to draw he will go far in the Architectural field.



**EDMUND G. MONAK**

"Ed"

**Architecture**

George Washington High School; Textile High School  
1931-32 Section President. 1933-34 Section President.

A student if there ever was one. His attractiveness appeals to the femmes, and his personality appeals to his friends. He says he has plans for the future. What is it, "Ed", a cottage made for two? No? Too soon for that. Well, I guess you want to become an architect like the rest of us. Don't let a small cottage stop you. In a case like that you can eat your cake and have it, too.



**FRANK HARRY NEIDIG**

"Spike"

**Architecture**

North Plainfield High School  
Lambda Sigma Kappa  
1932-33 Honorable Mention  
1933-34 Class President; General Student Council;  
Chairman Sophomore Hop Committee;  
Honorable Mention  
1934-35 Class President; General Student Council;  
Junior Prom Committee  
C.U.A.A.

Here is one of the most popular men in the School. Well known in and around Cooper's Halls for his joviality, spirit and leadership. A man of few words and great deeds. The junior class is indeed proud and fortunate to have such a distinctive leader. He merits applause.



**JAMES OLIVERI**

**Architecture**

Stuyvesant High School  
1932-33 Second Award

1933-34 Third Honor, Class Secretary-Treasurer  
Industrious? And how! Clever? I'll say! Do you realize that he has actually met success before he found work. Oh, yes! In the dictionary. Nevertheless, he has produced excellent drawings.



**REUBEN ORLANSKY**

"Rube"

**Architecture**

Stuyvesant High School; New York University  
1933-34 Secretary; President Dance Committee

1934-35 Class Vice-President; Arch. Editor of Cable  
So far he has had a very sorrowful career. In his short span of years he has met and overcome many trials, tribulations and vicissitudes. A dramatic career saw Rube hopelessly striving to "draw" a full house. He decided upon Architecture in order to be able to draw a better one. Successful in what he has attempted. These few words cannot justly describe him. He is frank in voice, honest in character, and disarming in personality.



**ALFRED OTRANTO**

"Al"

**Architecture**

Although Al is very quiet in his school tasks, he endeavors to fulfill them in a most convincing manner. The least detail or the smallest obstacle will be thought over carefully before any decision is made or any barriers overcome. Needless to say he is a fine chap and an admirable fellow; but, somehow or other, he manages to be financially embarrassed at the end of the week. This habitual impecuniosity practiced by the majority of us does not detract from the prevalent number of cheerful countenances with "Al" leading the group.







**JOSEPH H. PELLEGRINELLI**

"Pell"

**Architecture**

Textile High School

If per chance you are in search of a soft-spoken and well-mannered person, ask for Joe. He is envied and admired by all who know him. Enemies he has none, and he can always be depended upon to have his work well done.



**ALFRED A. RATHOFER**

"Al"

**Architecture**

Stuyvesant High School

Lambda Sigma Kappa

1933-34 Secretary; Vice-President; Sophomore Hop Committee

1934-35 Junior Prom Committee; Night Annual Committee

With his pleasing personality and a will to work, "Al" is one of the most popular fellows in his class. "Al" ways immaculate in appearance it can easily be seen why he catches many a feminine eye. His character and vision will be a great asset toward his future architectural accomplishments. Lots of luck, "Al."



**HYMAN J. SCHENKER**

"Hy"

**Architecture**

Franklin K. Lane High School; New Lots Evening High School

Yes sir, this lad is the class champion jokster. He keeps an innocently straight face and asks the silliest questions. In spite of these weaknesses he still possesses a mite of intelligence and is prompt and studious.



**MILTON STEIN**

"Milt"

**Architecture**

Long Beach High School

1932-33 Class Treas.

1933-34 Sect. Sec'y.-Treas.

1934-35 Sect. Sec'y.-Treas.

Milt is the Long Beach boy who has done and is doing some very commendable work in and out of School. To his classmates he is known as an accomplished "Monster of Cemeteries." His main interests are divided among Architecture, Mathematics and Figures in general.



**MORRIS STEINMAN**

"Moish"

**Architecture**

Passaic High School

1932-33 Track

His friends sometimes call him Peewee. But what of it? Napoleon was short in stature and look at the honor history has bestowed upon him. Who knows?—Someday we may have a skyscraper named after our friend Morris. The Peewee Structure—can you imagine what a glory that would be? But, he'll be just plain "Moish" to us. The small fellow with a big heart.

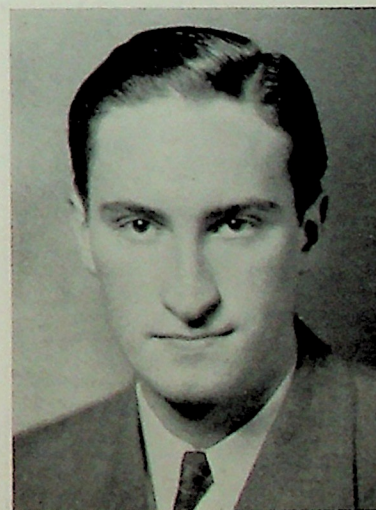


**SAMUEL TISSENBAUM**

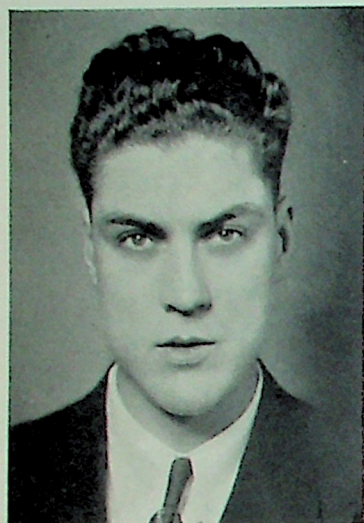
**Architecture**

James Madison High School

Come on out Sam, we know you! He's hiding behind that mask up there trying for all the world to look like old Sphynx. But 'neath that mask of indifference lies a soul alive with emotion and enthusiasm. A soul whose bubbling laughter and joy of living is revealed by that occasional grin which seems so ashamed of its existence. A soul filled with a love of music and beauty fired by his determination to make his life worth living. He seeks fame and fortune as an Architect.







**NICHOLAS TRIPOLL**

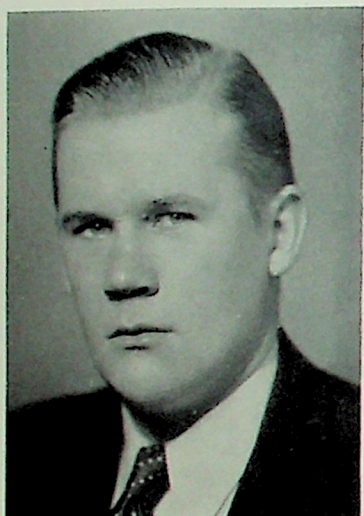
"Tripp"

**Architecture**

Murray Hill Vocational High School  
Mechanics Institute

One can safely say that "Tripp," is the tallest and biggest undergraduate. No one else in Cooper can vie with Tripp for physical honors. But, pray, do not be misled by his stature. He is one great fellow to get along with and his 6 Ft. 6 in. is short compared to the business ingenuity he possesses.

If you, perchance, meet someone in Cooper that you have to look up to, at an acute angle, that's "Tripp." Big things are to be expected from him.



**PAUL T. WIIRI**

"Weary"

**Architecture**

George Washington High School

"Weary" is a fellow with a disposition that wins many friends, and one who is always willing to help a fellow in despair. Behind his youthful appearance are the makings of a real man. He has a slight southern accent but he can't fool us, he's strictly from New York.



**ALFRED JOSEPH YACOMELLI**

"Al"

**Architecture**

Dickinson Evening High School  
Lambda Sigma Kappa  
1932-33 Hon. Mention  
1933-34 Section Vice-Pres.

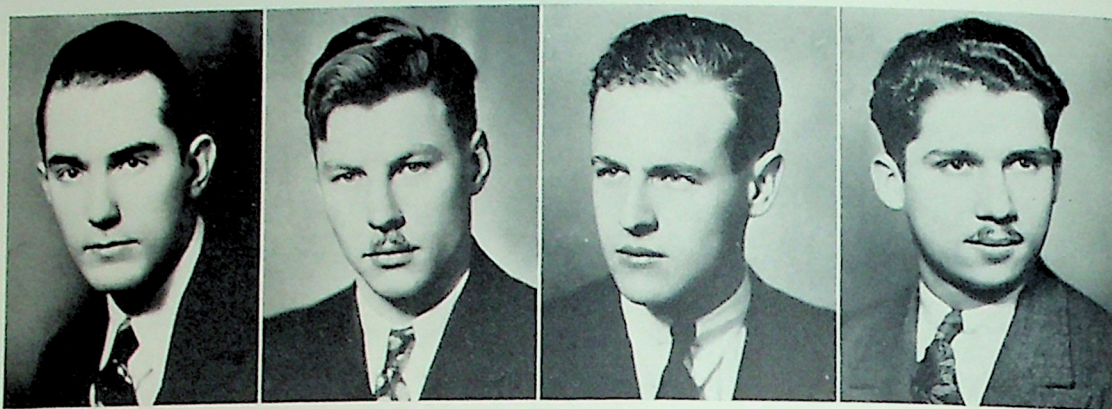
Stop! Listen! Look at that handsome countenance of one of the most congenial fellows in the school. Easy to get along with and a sincere friend. He has the intellect and the initiative necessary to assure him success in the Architectural field or in any other field for that matter. One cannot help but notice these characteristics when conversing with "Al." He is a regular fellow. And let us drink to him for helping elevate the class spirit by his participation in the class activities.



SOPHOMORE CLASSES

ARCHITECTURE  
DEPARTMENT





ALFRED BOBKOWSKI  
President

EMIL RIEHL  
Vice-President

RICHARD HOPPER  
Secretary

IRVING FRIEDMAN  
Treasurer

## CLASS OF 1937—ARCHITECTS



WITH the dawn of the new semester there sparkled upon Cooper's horizon a group so inspired with a love of school and class, and so vitally interested in the welfare of both, that it leaves behind a record which justifies its claim to the most active sophomore class in the annals of Cooper Union. This group, the Sophomore Architects, Class of 1937, received such remarkable cooperation from its members that in every one of its ventures success was inevitable. The Cable was given noteworthy support by subscriptions and one of the members of this class, Irving Papiroff, entered some excellent art suggestions for the book. He won the Cable Poster Contest and some of his work may be seen in this book. The officers and members of the class eagerly await their turn to take a more active part in the production of this book next year, their junior year. The Pioneer and A.A. were also well supported and it is hoped that their contribution to the "Blanket Fee" will make it a reality. From both the educational and social viewpoints, the members of this class will ever gaze back at their Sophomore year with only the very fondest of memories.

Picking up their pencils and triangles where they had been dropped at the end of the Freshman year, these men surged forward with great strides toward their Architectural goal. Hard and diligent work, coupled with grit and determination, brought them through the year with colors flying. Full benefit was derived from the lecture course, an innovation in the School of Architecture, in which once a week the students were taught and advised in open forum where all questions were answered by a competent lecturer. These lectures were soon accepted as a regular part of the course and were looked forward to with much eagerness and interest. Great progress was made in Architectural Drawing, the students being given a chance to display their initiative and individualism by being allowed to design their own projects from the problems given them by their instructors. The students now went at their work at a faster pace,



## T H E   \*   C A B L E   \*   O F   \*   1 9 3 5

their greater enthusiasm showing their interest in this type of work. Shades and shadows were studied and were soon mastered by these amateur geometricians, who realized the importance of this valuable course and its bearing on their future work.

The election of officers started the many activities of the class. These officers have more than justified the faith placed in them by their classmates. Beginning with a smoker at which plans for the year were discussed, and continuing through a maze of meetings, feeds and more smokers, the social season was brought to its height with the dinner and dance. This affair, attended by one and all, was from every angle the perfect social function. Beautiful girls and handsome young gentlemen, after having dined to their hearts' content, danced until the wee hours to scintillating rhythms amidst the charming atmosphere of the Hotel Brittany.

Our excursions into the realms of laughter were all too brief. So rapidly did the final examinations arrive that it seemed we had had no time to cut the pages of our newly purchased text-books.

Sleepless nights were then spent stuffing unfamiliar problems and assignments into our weary skulls. The results were quite gratifying, most of us having weathered the storm quite capably.

Our social and academic success may possibly have swelled our egos. Time may puncture these, but cannot ever rob us of our bountiful store of hope.

Just half of our careers at Cooper Union are over. Retrospection shows two years taken up in the main by hard work. And yet there is not one student in this class who does not feel that he has just concluded two of the most interesting, educational, and thoroughly enjoyable years of his life!





"The Romans were a great race, but they were cursed by the sterility which waits upon practicality. They were not dreamers enough to arrive at new points of view which could give more fundamental control over the forces of nature. No Roman lost his life because he was absorbed in the contemplation of a mathematical diagram."

A. N. WHITEHEAD



THE ART DEPARTMENT

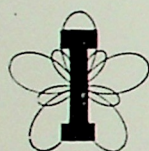
THE NIGHT  
ART SCHOOL





ANATOL SHULKIN

## MURAL PAINTING



N recent years we have been witnessing the awakening of a lively interest in American art in general, as well as an animated interest in mural painting in particular. The interest displayed, because of its magnitude and universality, cannot be termed merely a superficial interest which is so often the case with a sudden advent of some artistic novelty.

To be sure, the art of mural painting cannot be termed a novel art, for it is one of the most ancient branches of plastic art. We have early examples of these mural paintings, — it would be better to term them progenitors of our present day mural paintings, — dating as far back as the palaeolithic age, or approximately from fifteen to thirty-five thousand years ago. Some exceedingly interesting four color examples of wall paintings have been found in caves, and are attributed to early man of that period. This gives one a fairly good idea of the antiquity of mural painting. But, it does not in any way suggest the existence of a characteristic, peculiarity, common to the history of mural painting. The peculiarity, to which I refer, is a periodic advance and decline of interest in the art of mural painting.

Now, it is important to analyze what underlying forces are responsible for these periodic revivals of interest. Let us then ask ourselves the question: what elements are responsible for the present wide-spread interest in what some people term "A renaissance of American Mural art?" . . . It is obvious that the interest now shown in mural painting spreads far beyond the bounds of artistic circles. It is equally obvious that such a wide-spread interest in any artistic expression, especially when the work, as in the case of mural painting, is destined to become more or less a permanent public display, has a deep social significance and therefore increases the artist's responsibility to society.

It is significant to note that such periodic revivals of interest are by no means a new phenomena. Historically, these revivals of interest in mural painting invariably followed either great social upheavals or great social reconstructions. In other words whenever society goes through a period of revaluation of values, the process is naturally accompanied by a greater or lesser degree of readjustment. While the underlying force, responsible for



the awakening interest, in the artist for mural painting, is his desire to interpret and record the deep emotional experiences resulting from the changes brought about by the readjustment. The interest on the part of the public — this inarticulate giant — is a little more complex and is motivated by other elements besides the desire to express and record. To be sure, it is a desire to **express self**, but by one who is unable, for technical reasons, to record his own emotions and who has necessarily to depend upon someone else to record them.

Under such circumstances it shouldn't be difficult to perceive why the public is bound to display not merely an idle curiosity, but rather a vital concern in what is being done on its behalf. Since the claim of expressing the true artistic spirit of the people is made by many artists and art groups, it is but natural that it leads to differences of opinions and evolves, with the help of professional scribes, into sharp controversies over matters which are possibly as old as mural painting itself. At present the most spirited battles are being waged over such questions as: whether or not the subject matter should play an important part in mural painting; should propagandistic tendencies be permissible; and if used, will they be used at the sacrifice and to the detriment of the other more important artistic qualities. It is obvious that professional controversionalists thrive in just such an atmosphere and find it profitable. Rarely, however, do they take up an art problem for the purpose of solving it through the clarity and simplicity of analysis. Usually it develops into the sophistry of debate which invariably tends to be-fog, and not to clarify the issue.

So much for the controversionalists. Their importance is only relative, for it is almost an axiom, that whenever art is much debated, the debators flourish, but art and artists suffer. What is much more important is what will be the attitude of the American artist with regard to this unquestionably approaching renaissance of American mural art?

It is true that the European Moderns, during the hottest period of their fight for freedom declared, that "the true work of art is not what you paint out how you paint it." But it is equally true that this was not intended to be interpreted to mean, as some of our contemporary moderns think, that any painting or piece of sculpture containing subject matter should be tabooed and completely banished from the artistic face of this earth.

Will then the American mural artist choose to remain a boudoir painter, or will he have sufficient courage to face, and to try to understand life with all its complexities, thereby accumulating the artistic experiences so necessary to truly great creative effort, so that he may eventually draw upon them for his creations. Will he remain a bystander? Will he succumb to various advisers and listen to all sorts of commentators of pros and cons, or will he take a careful stock of himself in relation to the never stopping beat of the pulse of progress which is in reality life itself? These are the problems facing the American mural artists of today and he alone can solve them; no one will do it for him.

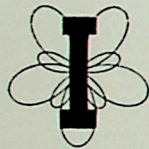
The questions facing the artist of today, if left unsolved, will face the artist of tomorrow, who is the student of today. Of course as time goes on, these questions will take a more acute form, therefore it is a problem for the students as well as for the artists of today. They must cooperate upon the solving of this common problem.





ALVIN MEYER

## SCULPTURE



N years past an art school was a place where a model was posed, and the student had the facility to work from that model. An instructor was supposed to give the student an academic training. It has been the policy of Cooper Union in the last few years to go beyond such an art education.

Due to the limited time in which a night school student has to do his work we tried to sift down the different phases of study to enable him to make the maximum amount of progress in a correct way in the shortest number of hours. Using a week as a unit of time a certain number of hours was allotted to drawing, modeling and composition.

Drawing was started off at the beginning of the year with five minute sketches. The time for poses was gradually lengthened as the year advanced to enable the student to take advantage of the facility of a quick spontaneous start plus an intelligent structural development.

Modeling was carried on with the thought in mind that the substantial study of form, movement and anatomy is necessary for a firm foundation. This method was adopted to enable the student to characterise and express in modeling the human figure in all its essentials in his own individual manner.

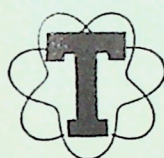
In the composition class the student was encouraged to give full expression to any or all ideas which he might possess. The instructor only guided him from the standpoint of personal experience, aiding him to develop his thoughts, and to make his composition practical in accordance with the profession. When the student was sufficiently advanced he was allowed to take the Beaux Art problems. Our success in this department far exceeded expectations, which induced us to believe that our method was in the right direction.





DAVID HYMES

## ADVERTISING DESIGN



THE advertising design course in the Cooper Union, headed by Mr. David Hymes, has been greatly improved. The student body has more to look forward to than students in a similar capacity at other art schools. Their education in this work is most thorough; and, because of this, eighty percent of the students in the advanced class have been able to obtain work of this type during the day. A large percentage of these jobs have been secured for the students by Mr. Hymes personally.

The students beginning in this work are trained to adopt the cultural viewpoint of advertising art, in conjunction with its technicalities. Both features directly benefit the students and their work becomes professional soon after the course starts. At the time of the exhibition of the art schools, the work of these students will be displayed and it is planned to invite the advertising managers of the organizations which the problems represent. This idea is an incentive to the students because the problems worked on will be viewed by the advertisers and may result in a contact for the student.

The fourth year has reached the most professional training possible. Mr. Hymes' co-operative plan tends to give the students a more accurate knowledge of their work and give greater opportunity for improvement. This plan was inaugurated at the beginning of this term for a special group of selected students as post graduate work.

The co-operation of such organizations as R. H. Macy & Co., American Tobacco Co., Fortune Magazine, Paramount-Publix Theatres, the O'Sullivan Rubber Co., and others, has been obtained. These companies give the students, through their instructor, advertising art problems. When the problem is completed, the organizations submit their professional criticism, in addition to that of the instructor. The problems are usually the ones that are given as part of the company's actual advertising program, and in some cases fit in perfectly with their campaigns. In addition to the valuable criticism, the students are compensated for work accepted, although the advertiser is not under any obligation. Two of the leading advertising magazines, "Advertising and Selling" and "Signs of the Times" have given publicity to the School, its plan, and the students engaged in this class.

All this sums up an excellent course, and a good education for these potential advertising artists.





## PICTORIAL DESIGN



NEW emphasis upon the importance of design, with a return to design in art, constitutes the chief and very valuable characteristics of the recent art movements which have been sweeping the country. In Cooper Union the importance of design is greatly stressed. Designs and compositions of every order are required from the students, generally one composition a week being an obligation of the course. This year the staff of instructors has been arranged in pairs, a teacher of design working in close co-operation with each of the instructors in painting.

Compositions made in the designing classes are frequently carried on and worked out in the painting classes with the painting instructors who themselves stress design. The results are profoundly interesting. The effort is not only to give the student the necessary technical equipment for his craft but to encourage him to think, to create, to find himself and his own expression in art.

The designs made vary greatly in scope and style according to the abilities and tastes of the students. One student may be working upon a fine drawing for an air mail stamp while another in the same class builds up the cartoons for enormous murals with figures of heroic size.

It is the general aim to keep the plan of the work in pictorial design so elastic that all students are allowed free expression of their own particular tastes, developed under the guidance of a faculty group so varied in its training and scope as to afford competent handling of the problems that the robust young talents of the student body may present.



THE CLASSES

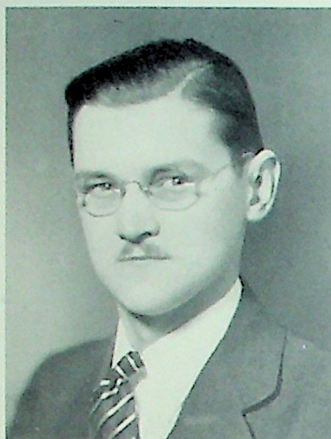
THE ART  
DEPARTMENT



T H E \* C A B L E \* O F \* 1 9 3 5



HERON BLECKER  
Pictorial Design  
Boys' High School; Glovers-  
ville Prep. School.



CHARLES H. CHAMPAGNE  
"Champ"  
Painting  
California Institute of Fine  
Arts, San Francisco, Cal.



ALEXANDER A. L. ECCHY  
"Duke"  
Painting, Design  
Scuola Industriale.

ALDO FRATTINI  
"Al"  
Pictorial Design  
Stuyvesant High School



VITO GALLO  
"Willie"  
Pictorial Design



ARTHUR J. GARATTI  
"Red"  
Painting and Design  
De Witt Clinton High School.





# THE \* C A B L E \* O F \* 1 9 3 5



JOHN J. PUCCIO  
"Jack"

Pictorial Design  
Eastern District High School.



JACK PERCY SKOLNIK  
"Little Nemo"

Pictorial Design  
1934-35 Class Treas.



FRANK SPAGNOLO  
"Frank"

Pictorial Design

PETER TUCCI  
"Perino"

Pictorial Design

JACK WEISBACH  
"Dancing Feet Jack"

Pictorial Design

Textile High School; Alexander Hamilton High School; Fencing Team; Track Team; Basketball; Dramatic Supervisor of Stage Scenery.







**MARZIO T. DeLORENZO**

"Duke"

**Pictorial Design**

"Duke" as his name implies, is a high-hooker and a good-looker who sets the feminine hearts to thumping in the environs of Bay Ridge. He is a gentle-mannered fellow, and a real gentleman, and because of these characteristics it is quite difficult to comprehend why he is known as the "Gallopig Gin".



**HARRIET H. McNUTT**

"Harriet"

**Advertising Art**

Brazil High School, Brazil, Indiana; Monticello Seminary, Godfrey, Illinois.

1934-35 Class President; Art Student's Council; Art Editor Cable.

Harriet was first approached for services on the Cable Board while she was at work over a drawing. After she accepted the job she admitted losing a whole night's sleep thinking that perhaps she would not make a good Art Editor. However, now that the Cable is completed, all those worries are over and during her spare moments she can be found in the nearest "bean wagon" partaking of her favorite fare—Hamburgers.



**WILLIAM JAMES SCHNEEBERG**

"Bill"

**Advertising Design**

St. Michael's High School, Brooklyn  
1934-35 Class Sec'y; Art. Bus. Mgr. Cable

Bill is one of our regular fellows. Whenever able, always plugging for "The Cable."



"What is exact about mathematics but exactness?  
And is not this a consequence of the minor sense of  
truth?"

GOETHE





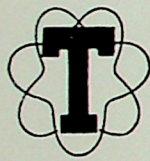
S. CHALL  
President

J. D. MERRIWETHER  
Vice-President

H. F. SCHROEDER  
Secretary

J. G. HOF  
Treasurer

## ART PREPARATORY CLASS



THE first real opportunity the freshman class of the Night Art School had to meet and know their fellow members was at the dance held at the International Institute on 17th St. Everybody had a grand time and to the surprise and pleasure of everyone the credits balanced the debits.

For the first few months in our life and composition class we modeled in clay. To feel and see a shapeless mass of clay gradually become what our brains wanted and our hands willed, developed our sense of three dimensional proportion. Designs and compositions were evolved from our sketch books. We found that the simple statement was by far the most impressive, and that things we spent long hours laboring over were usually bad.

The same thing held true in the life class. Those brief sketches sometimes had real stuff in them. The contour drawings sometimes looked a bit outlandish, to be true, but certainly there was a sensitive feeling of life that gave us the satisfaction of gained knowledge.

When we began executing and turning in illustrations, and having them pinned on a wall with twenty or thirty others, we saw for the first time how good or bad we were.

They were all rather bad at first, but now after five months of training, an outside observer can see a little improvement. For one thing, there is a great deal more thought behind the idea in the drawing, and though the execution is still a little crude, the pictures tell a story.

Our most recent problem in the architecture class was to build the chancel



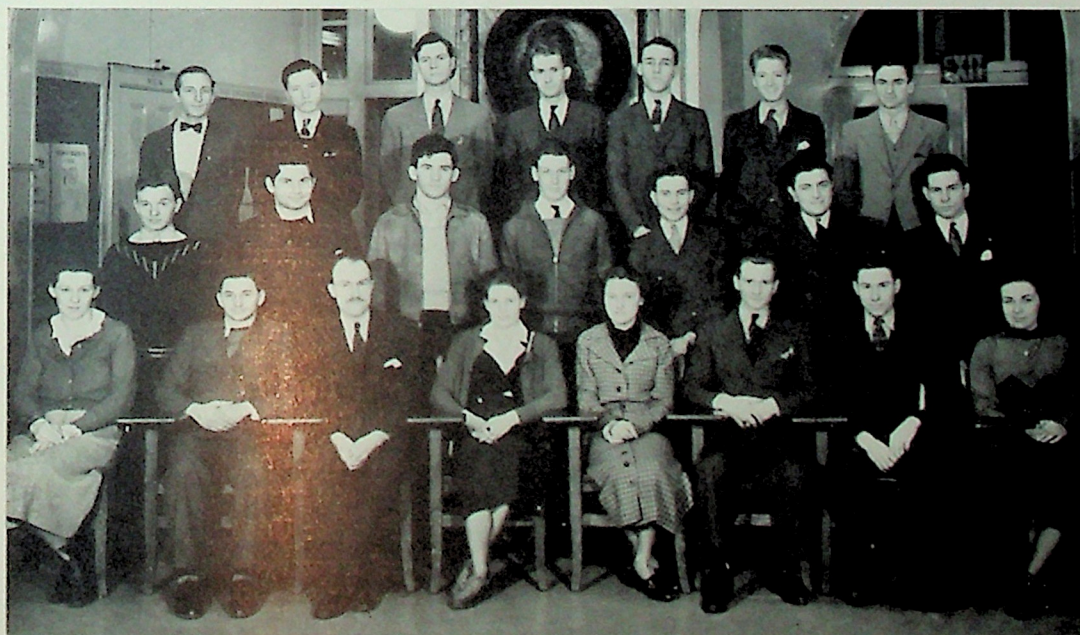
## T H E \* C A B L E \* O F \* 1 9 3 5

of a church. We were divided into four groups, each with a leader. The leader's problem was to issue work to his co-workers in much the same manner as that used in business or shops. This in itself is an innovation. It develops executive ability and the power to work with others harmoniously.

To our surprise we became rather handy carpenters, glaziers, painters, masons, etc. These models were about four feet high by two feet square on the base. Some had carefully indicated masonry, and hard-wood trim, while others were plastered and painted wood trim. There were Gothic, Classic and Greek revival designs. The wall surfaces were covered with murals, tapestries, ornamental reredos, and stained glass windows. When completed they made an impressive array.

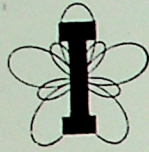
So far, our work had been comprehensive of a good many of the allied arts.

We are candidly asked what we think of this new form of preparatory work. Honestly, we don't know, but we are learning things that we never thought were allied with art, or rather the drawing of pictures. We believe that it's as sound a set of basic fundamentals that we've ever run across, and we are contented with our lot, for the present.





## ART SCHOOL ALUMNI NOTES



It is sometimes enlightening and always edifying to dwell upon the lives and accomplishments of some of the more successful former students of our Art School. Consequently, the motive of this essay is, not to fill one with a fervent idealization of the characters involved, but simply to afford us, the students who are to continue art study at Cooper Union, and you who are just completing your courses, a richer outlook on the path before us as well as a better appreciation of the worth and worthiness of our school and its instructors. Since art is something that thrives on inspiration, what could be more inspirational than a glimpse of a few typical examples of achievement, born of the same opportunities that are ours if we will take and use them. With the above object in view let us look into the following:

### ADOLPH A. WEINMAN

Mr. Weinman, internationally famed as a sculptor and designer, was born at Karlsruhe, Germany, 1870. He studied in public schools in both Germany and New York. While not yet a man and still oblivious of the eventful future toward which this was the first step, he entered Cooper Union. Here he labored untiringly during those formative years of late adolescence. As a student, he won the Mitchell Vance prize, an enviable award of the Art Students League. When twenty-one years of age he was engaged professionally and it is then he gives us evidence of the well directed genius in him. In 1907 he designed the Soldiers and Sailors Monument at Baltimore, Md.; the Lincoln Rotunda of the State Capital at Frankfort, Kentucky, 1911. During 1912-13 he designed and sculptured the facade of the Municipal Building of the City of New York; he was called upon to design the dime and half dollar of United States currency in 1916 and later the U. S. A. Victory Button.

Among his awards are the Fine Arts medal of the American Institute of Art in 1929, the Gold Medal of Honor in Sculpture from the Architectural League of New York in 1913, and the National Arts medal, 1929.

Mr. Weinman is a member of the National Institute of Arts and Letters, the American Academy of Arts and Letters and President of the National Sculpture Society from 1927 to 1930.

### LEO FREIDLANDER

Mr. Freidlander was born in New York City in 1889. Having attended public schools in and about the City, he entered Cooper Union where his unusual talent at sculpturing was discovered and encouraged with careful training and correction. Advised to continue his study of this significant field of Art, after he had completed his course at Cooper Union, he journeyed abroad where he acquainted himself with the works and styles of European masters. Among Mr. Freidlander's outstanding achievements are the Bas Relief of the National Chamber of Commerce, Washington, D. C., the main



central pediment of the New York City Museum. He was awarded in competition the designing and execution of two colossal equestrian groups for the Arlington Memorial Bridge, Washington, D. C. To mention some of his awards, we have the Prix de Rome, 1913; the Helen Foster Barnett prize of the National Academy of Design for two years, 1918 and 1924, and the Silver Medal in the Sesquicentennial Exposition at Philadelphia, 1926.

#### XAVIER J. BARILE

Mr. Barile was born in Italy in 1891. He came to the United States in 1906. With the learning of a private college to his credit, he entered Cooper Union. Here he applied himself zealously to the task of mastering the Arts and as a reward for his efforts ranks among the successful artists of our present day. His portrait paintings are on a par with the best, while his landscapes etchings and illustrations command widespread admiration. Mr. Barile has had his work exhibited at the National Academy of Design, the Anderson Galleries, the Cincinnati Museum, the Italian-American Arts Association and the Art Students League, winning several prizes and honorable mentions.

Among others who attended Cooper Union and who have earned for themselves the approbation of the severest critics as well as the endearment of all art lovers we take the liberty to name:

Mr. Elwood Whitney, at present an important member of the art staff of J. Walter Thompson & Company, foremost among the advertising concerns in the city.

Mr. Flynn, Art Director of the magazine, "Asia".

Mr. Saul Tepper, whom you all know for his numerous illustrations in "The Saturday Evening Post" and other magazines.

Mr. Goldsmith, Head Designer for William Baumgarten & Company, one of New York's old and established interior decorators.

Mr. Luigi Lucioni, whose paintings adorn the Metropolitan and other art museums in New York.

Mr. Carlo Ciampaglia, who numbers among our present instructors, has the Prix de Rome to his everlasting credit as well as a reputation for oil painting that many strive for but few attain.

Still others who share honors are: Augustus St. Gaudens, Isaac Josephi, a master at miniature, Raphael Soyer, Maurice Sterne, Oronzio Maldarelli, Hector Hamilton (Architect) and our own Gaetano Cecere, who has produced many Beaux Arts winners in his sculpture class.

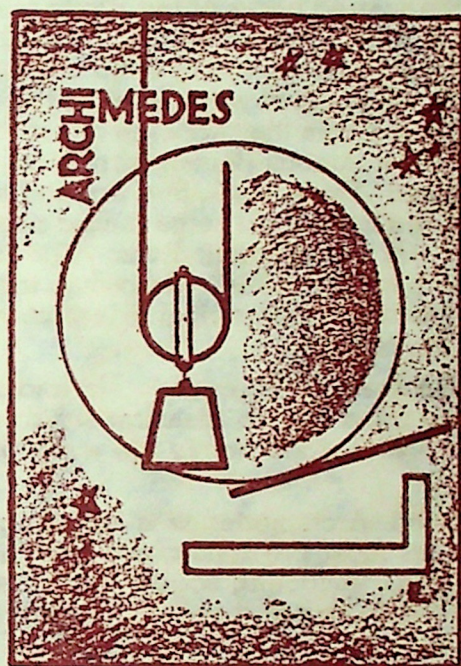
Maybe you yourself are familiar with other Cooper Union Art School luminaries for the Hall of Fame, for surely there are others. But whether or not let us bear in mind the sage remark, "Genius is one per cent inspiration and ninety-nine per cent perspiration," and strive for the best that is in us, even though we may meet it only half way.



"There is an astonishing imagination, even in the science of mathematics. . . . We repeat, there was far more imagination in the head of Archimedes than in that of Homer."

VOLTAIRE

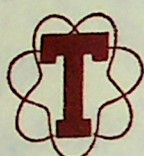




## ACTIVITIES



# Archimedes



HE Walls of the Carthaginian City, Syracuse, still stood awesome and malignant in that they hid all manner of fearful things. The sun was hot and burned alike the boards beneath the feet of impatient Roman warriors and the scarred backs of the slaves who oared the ships that bore them. Yet they shivered as they waited the word to start the attack. Then clean and sharp came the call of the trumpets. The galleys leaped forward as if alive. Above the creak of wood against the wood and the clash of weapons could faintly be heard from the shore the din of the balance of the army as they started forward in that famous Roman formation, *Sambuca*. Suddenly some one at the prow shouted "There it is!", and pointed to a mass of wood projecting above the walls of the city. As if some magic spell had been cast upon them, the Romans turned and fled for their lives. The helpless leaders could do nothing save tear their hair and curse. Marcellus, the general, in jest said, "Let us stop fighting against this Geometrical Briareus, who outdoes the hundred-handed monster of mythology."

Archimedes was the "Geometrical Briareus." He had devised ingenious engines of war which had so often and so disastrously driven back the Romans that the mere sight of a piece of wood above the walls of a city could and did demoralize them.

When Syracuse finally fell, Archimedes was hurrying to make peace with Marcellus by giving him his most precious globe which was famous all over the Greek and Roman world. A looting soldier struck him down. This story of his death is the most credible one and proves him not so anti-social as some would have us think.

However the machines Archimedes invented were to him, "Accessories of geometry practiced for amusement." Anything tainted with profit or usefulness was sordid and not worthy of inclusion in his books. He would rather bend his talents to the solution of some hypothetical problem in mathematics.

Archimedes' first contacts with mathematics came through his father, Phidias, who was an astronomer. His education was furthered in the Egyptian School founded by Ptolemy. It was not until he returned to Syracuse, his birthplace, that he began to build his reputation, which has never been equalled by anyone but Newton. Most of his books still survive for they cover a remarkable mathematical range.

An amusing anecdote claims that Archimedes was in his bath when he discovered how to determine the density of a substance by means of its specific gravity. Elated he dashed through the streets stark naked shouting "Eureka!"











## GENERAL STUDENT COUNCILS

**T**WENTY-SIX years ago, in the Fall of 1909, several men of the Day Tech organized themselves in a group known as the Cooper Union Students League. The main purpose of this body was to commemorate the birthday of Peter Cooper and the founding of the Cooper Union and to promote good fellowship among the students. To aid in this purpose one large social function was held each year, this being in the form of a play and dance. The program in those days was arranged and presented by the students themselves. However, when the term's work concluded, the students were not highly successful in their scholastic endeavors and so professional talent was engaged for future affairs.

Thus, this yearly affair increased in attendance until in 1921 it was necessary to engage the main ballroom of the old Waldorf-Astoria. The outgrowth of these affairs is our Annual Dance held in the spring of each year and celebrated by Faculty and students alike. It is also interesting to note that from programs printed at these Annuals of long ago has developed our present annual publication, "The Cable".

Athletics were inaugurated by this league and managers of the various teams were appointed and money was appropriated for the necessary equipment.

Sensing the need of a publication for collecting the general opinion of the students and keeping the students informed of the activities within the Union, the League appointed a committee to publish "The Cooper Pioneer", the first issue of which appeared in January 1921.



NIGHT ENGINEERING COUNCIL



## T H E \* C A B L E \* O F \* 1 9 3 5

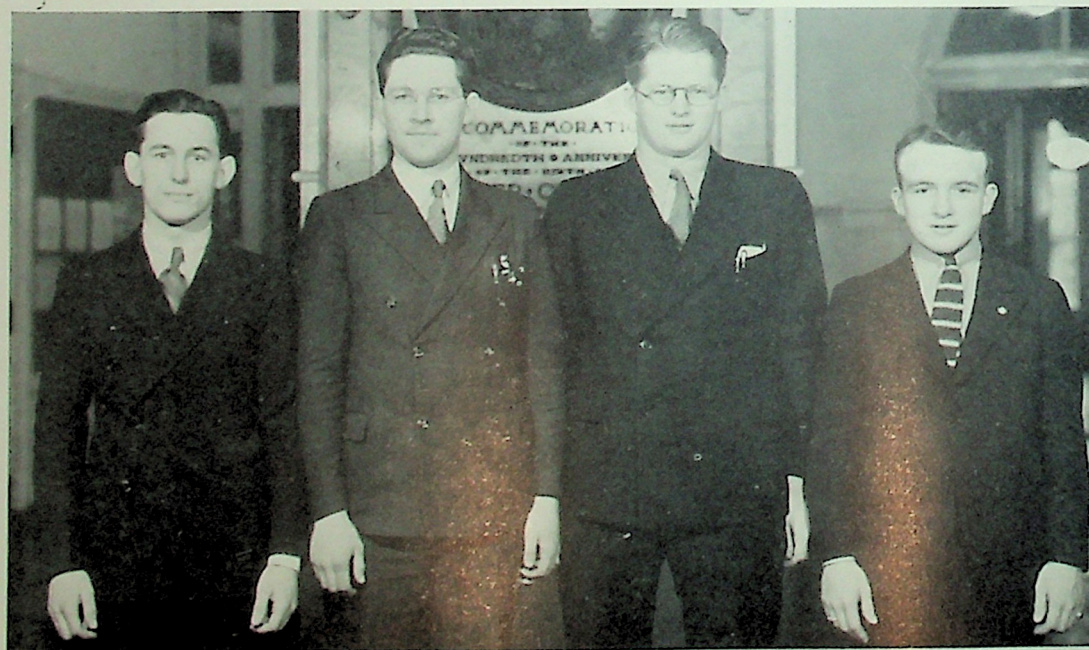
In 1924, under the guidance of late Professor Hartmann, the students' councils were formed which consisted of the presidents of the classes of the various schools. The League obviously passed out of existence.

The student council plan functioned for a good many years. The Faculty member was our present Dean, Prof. Bateman, whose intense interest in student affairs was responsible for this plan being so successful.

However, with the death of Dean Hartmann and the appointment of Prof. Bateman to the position of Acting Dean, a new plan was presented, The Towle Plan. Under this plan, four committees were formed, each having under its jurisdiction, an activity as athletics or publications. The fourth committee was to handle all matters not under the jurisdiction of the other three committees. This fourth committee was known as the Students' Affairs Committee of which Prof. Enders was chairman. It consisted of the class presidents of the Night School of Engineering and the Day Tech and had representatives of the Night and Day Art Schools. This was a step toward the ideal of Peter Cooper which was unity—a union—a group representative of all the schools.

The students in some of the schools were dissatisfied, however, with the representation of the various schools, the membership of the Night School of Engineering being predominant, and together with the fact that the system of the four committees was intricate and the duties overlapping, the plan ceased to exist after one year.

To replace it, Prof. Brumfield was appointed to head a group of two other Faculty men, Mr. Roemmelle and Mr. Starr to form a Faculty Committee on Extra Curricular Activities. This committee formed students' councils in the



INSTITUTE OF TECHNOLOGY COUNCIL



## T H E \* C A B L E \* O F \* 1 9 3 5

various schools, four in all, to be composed of the various class presidents. But the need of a governing organization composed of members of all the Day and Night Schools of the Union was apparent, to discuss and dispose of items which concerned the welfare of all the students.

And so a General Students' Council in the form of a Senate body was instituted by the Faculty Committee on Extra Curricular Activities which consisted of four members elected from each of the students' councils from the four schools. This is the plan now functioning and appears to be most desirable of all.

The accomplishments of the General Students' Council this year are numerous. First and most important is the inception of the Blanket Fee, a plan which has long been needed at the Cooper Union to further extra curricular activities by eliminating the financial worry of these activities. The plan, which is in force in most colleges, consists of each student paying one sum to cover a subscription to the Pioneer and Cable and membership in the athletic association and also a bid to the Annual Affair. By the entire school subscribing, or nearly so, the amount payable by each student is made considerably less than if he purchased the memberships and subscriptions separately.

The council has also begun the collection of data from the various activities to be published in book form and given to incoming men of the freshmen class. This book will appear in September at the opening of the school year.

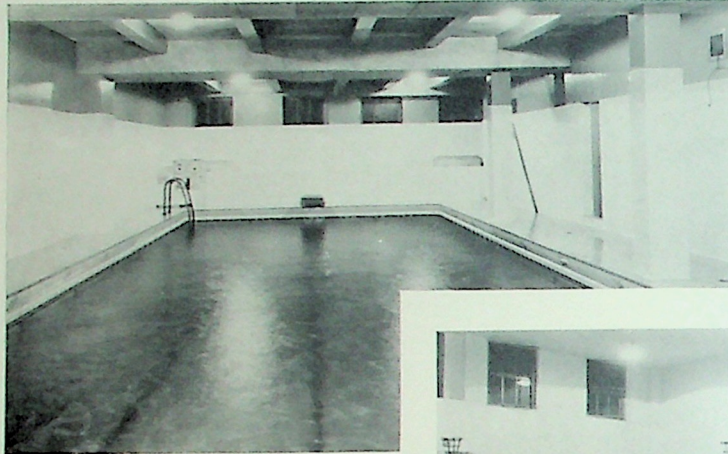
A Gold "C" Club was also formed this year, which has been given permission by the Faculty to draw up a constitution and start functioning, as a varsity club. Membership will only be available to wearers of the Gold "C".



ARCHITECTURAL COUNCIL



## ATHLETIC ASSOCIATION

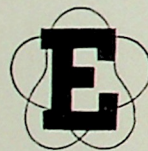


CHARLES MIKULKA  
PRESIDENT

LYLE B. WEBSTER  
VICE-PRESIDENT

MICHAEL ARUCK  
TREASURER

JOHN B. MAYER  
SECRETARY



MERGING from its somnolence of the last few years, the Athletic Association this year assumed its rightful position as the leading extra-curricular activity. This was due mostly to the fine support of the Alumni Federation and to the curtailment of varsity sports which were largely supplanted by intramural contests.

When the officers were elected last April, Mikulka and Robert Weyand were chosen to represent the Day School, and Mayer and Aruck to represent the Night School. Due to the stress of scholastic work Weyand was forced to resign and Webster was appointed to succeed him. The officers performed their duties nobly and they have reasons to be proud of the success of the A.A.

For the second year in succession the Cooper Union Alumni Federation procured the beautiful Christadora pool and gymnasium for the use of the students. Here the A.A. conducted competitions in basketball, water polo and swimming, wrestling, boxing, gymnastics, and also gave instructions in life saving. Without the aid of the Alumni, so varied and extensive a program would have been impossible and the A.A. is truly grateful.

The start of the school year brought the regular call for basketball candidates.



## T H E \* C A B L E \* O F \* 1 9 3 5

With the opening of the pool and gymnasium facilities to the members of the A.A., the various sports got under way. The basketball team mixed physical development exercises with "Black-board talks" under the guidance of Head Coach William G. (Red) Laub. The pool became a mass of students striving to imitate the piscatorial creatures. Most prevalent of water sports was water polo, a game which couples swimming ability with the utmost of stamina and endurance. Besides the various swimming races which were conducted at various intervals, a number of men displayed great ability at diving, so amply provided for by excellent diving boards.

Another feature of the pool was a life saving class for the Cooper students. This class was organized, and functioned smoothly, under the tutelage of Mr. Donn of the Christadora House. Through this medium, a number of the students became proficient in the various carries, the methods of resuscitation and first aid.

The gymnasium, meanwhile, kept all its facilities in full swing. A group of six sturdy young athletes joined together to form a gymnastic team. These men could be seen at any time indulging in various tumblings, pyramiding and perfecting their apparatus technique. Quite a bit of prowess was herein displayed and it is hoped that in the future, a sufficient number of men will further their interest in this phase of sport-life so that inter-class and inter-collegiate competition will enhance Cooper's reputation in the world of sports.

There is little doubt that an endeavor will be made to organize a wrestling team next year, due to the great interest shown in this sport and the amount of talent noticed while the members were engaged in wrestling among themselves. A few men from the wrestling team of a few years ago are still at Cooper and, doubtless, they will be glad to reorganize a team in this sport.

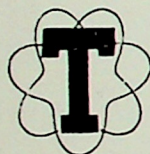
It is also very likely that a bid for a boxing team will be put forth. Capable men frequently used the punching bag in the Gym and sparred a few rounds. These students also aided beginners to make themselves proficient. Thus it is probable that one of the first sports in Cooper to be revived will be boxing.

There were several factors that stood out during the year. First of all there was the spirit of cooperation and helpfulness that prevailed throughout the student body. The other was the willingness of the men to support athletic activities of all kinds. More men supported the various sports during the year than for the past four years. These factors combined with the assets of the Blanket Fee undoubtedly will lay a foundation for a brilliant future in sports for Cooper Union.





## BASKETBALL



HE only sport in which Cooper participated in intercollegiate competition during the year was basketball. Always the leading sport of the college, this year, though disastrous from record standpoint, saw a further increase in the popularity of basketball, this following the trend in other colleges. With the return of William G. (Red) Laub as head coach, after a year's absence, prospects for a formidable team seemed bright. Twenty five men from both Day and Night Schools turned out for the team at the first call for candidates. Among these were two veterans and some excellent Freshmen prospects.

After the first few practice sessions, which were devoted to calisthenics and a review of the fundamentals of the game, the squad was cut to eleven men, and Coach Laub then prepared a rigorous training schedule for the difficult 16 game schedule which had been arranged by Manager Shapiro.

It was only after trying many combinations that the energetic Laub was able to find one that clicked. The tentative first team was composed of Block and Frisch, forwards; Johnny, center; and Sklar and Roulette, guards. Furnishing spirited competition for the varsity berths were Lang, Eickenbaum, and Scherb, forwards; Leon, center; and Mikulka and Adams, guards. All of the squad except Lang and Adams were veterans.

The team's first game was confined to testing the men for their respective positions and therefore the setback by the New Jersey College of Pharmacy in the opener, by a score of 37-22, was no surprise. In the second game, however, Long Island University, which later proved to be one of the best teams in the



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East, handed our boys a 64-14 beating. The team was so busy trying to play gaps in the defense that it never had time to start its offense.

Brooklyn Polytechnic, our traditional rival, furnished the next opposition. The final score, Poly, 32 and Cooper, 26, was due to the Poly's fine foul shooting. Al Sklar led the way for the scorers with five sparkling field goals.

Two games followed which our team lost, though leading in the early stages of both. The victor in the first was Savage 36-18 and in the second Webb Institute finished on the long end of a 26-12 score.

The fifth game with the strong Panzer College quintet was a heart-breaker. With but twenty-five seconds to play, the score was tied at 23 all after we had led at half time by 11-10. However, Panzer finished with a rush to win by 28-23. Two games against superior opponents followed, as we lost to Manhattan College and Pratt Institute.

Our quintet met Dana College in the next tussle and tho we led for three quarters of the game, Dana's strong reserves gave them the victory after an overtime period, by 34-33. Once more the team's inability to make good the foul shots cost the game.

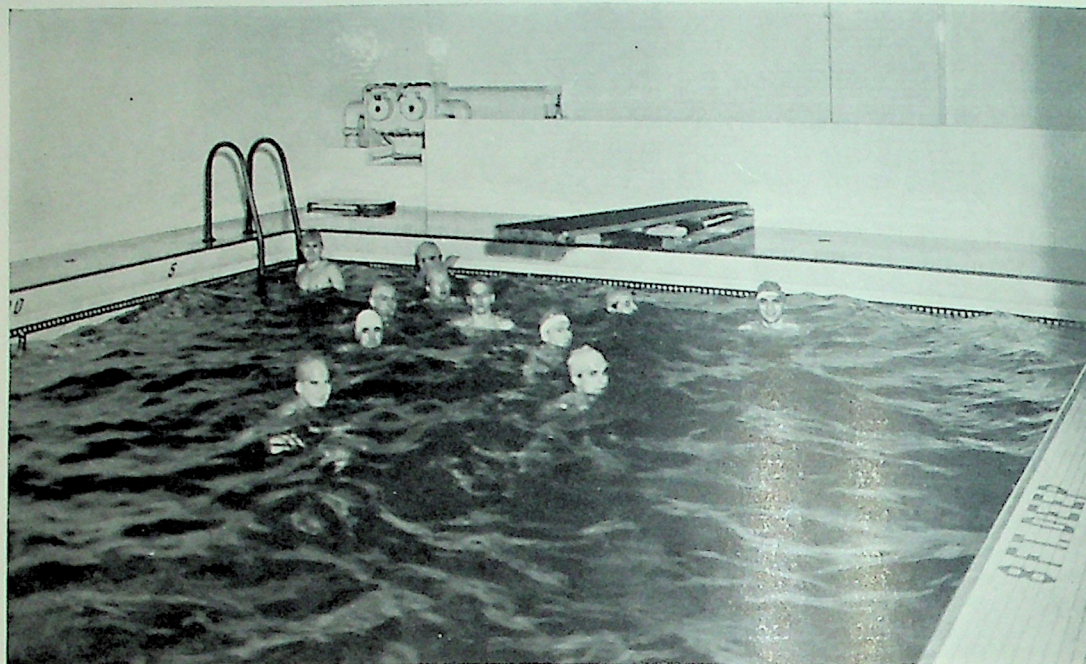
Two of Jersey's finest teams, Rider College and Stevens Tech. proved their mastery to Cooper, though our five showed consistent improvement. Lang had come along fast from early season and Block was consistently dependable.

In the following battle with the Cathedral quintet, the team gained its first victory by a 32-28 score. Roullette, and Mikulka both were featured with eleven points apiece. There followed three losses, to Brooklyn Pharmacy, Upsala and Bloomfield Teachers. In all these games our team, over anxious, had many fouls called against them, topped by 25 in the Bloomfield game.

In the final game, the Cooper basketeters displayed the best form of the season as they downed the strong Newark College of Engineering five by 32-15 margin. Block starred with thirteen points. Bob Leon and Pat Roullette played their farewell appearance in this game.

Although to a casual observer the season would appear disastrous, much advancement was made. Block, Lang and Mikulka will furnish a strong nucleus for next year's team and, with the sincere support of the student body it is hoped that the 1935-36 season will see the return of championship Cooper basketball teams.





## WATER POLO



NEW sport at Cooper, water polo, manifested itself as the most healthful and most popular sport during the school year. During the previous scholastic year, 1933-34, many students developed amazingly in water sports at the Christodora Pool and it is but natural that they should organize to participate in this most strenuous of water sports, water polo.

At the start of the season, many pick-up teams were formed and the competition was keen. As the men became better acquainted with the rudiments of the game, a cry arose for an inter-class tournament. Teams were formed in both Day and Night Schools, but an intramural tournament was held only in the Day School.

Under the direction of Frank Kelemen a round-robin tournament was held. The Seniors, due perhaps to strenuous studies, or perhaps, considering the game as too juvenile, entered no team. In the first game the Sophs met the Juniors and handily defeated them by a score of 7-3. The Juniors led at half time 3-1, but could not hold their advantage against a heavy, fast and tricky Soph team, which was backed by plenty of practice.

The Juniors, smarting under their initial defeat, tore into the Freshman team to gain a 7-1 victory in the second game. The Frosh buckled down in an attempted rally in the closing moments but their efforts were of no avail. Jud, Captain and a star goalie, of the Juniors, and Kudac, a 210 pound forward, were stellar in victory.



## T H E \* C A B L E \* O F \* 1 9 3 5

The final game found the Sophs pitted against the Freshmen. The latter could not cope with their Aggressive Adversaries, and the Sophs were triumphant, 9-1. The second year men, however, used two full teams and were "Under Wraps" all the way.

. While this tournament was in progress, the Night men were wasting no time. Games between various teams were played and when a clamor arose for a Day-Night game, they were far from unprepared. To meet the challenge of the Night School, Day presented a combination composed of Keleman, Kirby, Klein, Adams and Jud. The Night aggregation included Aruck, Schroeder, Reuss, Roulett and Wille.

The over-confident Day team met with an unpleasant surprise as the Night Team forged ahead to lead 3-1 at half time. Led by Schroeder, who was by far the best player on either team, the Night men displayed a brilliant defense and were also strong on the offense. Amidst cramps and injuries on both sides, the Day team staged a strong rally to tie the score at 3 all. Here the evening students stemmed the uprising tide and the game ended with the score unchanged, thus necessitating a play-off game.

The following week-end, Day-Night competition was resumed. A rare combination of an "On-Night" for the Day squad, and an "Off-Night" for the Night group, resulted disastrously for the evening natators. When the spray of the battle cleared, the score had registered 10-1, with the losers fighting gamely. Three of their former squad were missing, however. Jud and Keleman starred on the Day offensive, while Keval registered the lone tally for their night opponents.

This first season's showing in water polo proves that the game has taken a firm grip on the students. One of the most healthful of sports, it requires no great physique or lengthy and arduous practice. Perhaps in a year or two, Cooper may send a crack water polo team into competition with other colleges. However, it is certain that the innovation will at least continue as an intramural sport and will no doubt gain additional popularity.





## THE RIFLE CLUB

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R. STUMPP  
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S. UDELL  
M. WEINTRAUB  
L. WHITE

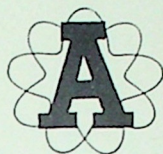
The Cooper Union Rifle Team of 1933-34 partially comprised of the above members, ended their season by defeating St. John's University in a match held late in April.

Due to the difficulty of obtaining a range on which to practice, the 1934-35 season was rather late in starting. Through the diligent work set forth by the officers, the team obtained the use of the 244th Coast Defense Armory, located at 7th Ave. and 14th St. The acquisition of this practice ground afforded the squad five separate ranges and quite a number of rifles. Through the cooperation of the Bureau of Civilian Marksmanship of the War Department, ammunition was plentiful.

Because of the lack of time, the only matches scheduled were with the rifle team of Stevens Institute of Technology and St. John's University. The unusual interest displayed this year is taken as a positive indication of a bright future for Cooper Rifle Team.



## THE CABLE



FEW YEARS after Cooper Union first offered complete courses in engineering, the students felt the need of a publication to record their undergraduate life. The matter was, however, permitted to slide for a few years before anything constructive was done.

It was in 1922 that Professor Enders managed to arouse enough interest in such a publication that the student body undertook the task. Thus there was formed the first of a series of staffs which have continued to offer to Cooper students a yearbook worthy of any college in the country.

Appropriately, the yearbook was called the Cable, in honor of that great feat of science which was financed by Peter Cooper. The first volume set the style in binding, art work and composition for ten succeeding volumes, including that of 1931.

In 1932, the Cable first departed from its original Maroon and Gold and blossomed forth with silver emblazoned on its cover and Aviation as its theme. This idea of dedicating the book to a branch of science was so well liked that it has been followed down to the present issue, which has Mathematics as its theme.

The Jubilee Issue was presented in 1934, commemorating the seventy-fifth year of Cooper's history. This was the first Cable to receive recognition outside of Cooper and the editorial staff of this book is proud in the possession of an honor certificate from the National Scholastic Press Association.

The Cable has seldom been in a precarious position financially, being well supported by the student body. Only once has it been necessary for the Student Council to lend aid, and on this occasion the surplus from the Annual Dance was offered to balance the budget.

The Cable is a publication which has been the pride of several publishers and printers because of the type of its contents and composition. It is one of the few college annuals in the country which is issued solely by a Night School staff and this, in itself, deserves commendation.

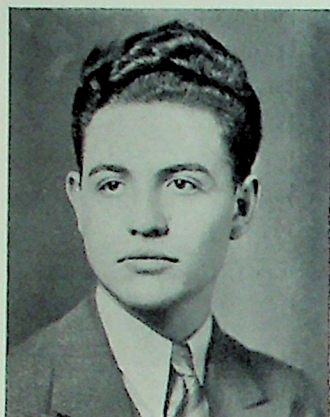
Ex Post Facto, the honorary society of the Cable, was formed a few years after the inception of the Cable. Each year, deserving members of the staff are elected to this society and they aid in the preparation of succeeding Cables. Thus it is through Ex Post Facto that the Cable is carried on from year to year.

While every man on the 1935 Cable Staff performed his duties well, the success of the book may be largely attributed to the editor-in-chief, Milton T. Way. In addition to his own job of organizing and directing the staff, Way spent his "spare time" in aiding other members of the staff in their tasks.

Much credit is also due to those demons of the business staff, George Kligfield and Max Yesowitz. Stepping into a job which proved to be too time-consuming for Fred Emigholz, who resigned, Kligfield, aided by the able Yesowitz, came through nobly to make the book a success. Other members of the staff who are deserving of special mention are: Harriet McNutt, who is responsible for all the art work in the book; Irving Dlugatch, Managing Editor, who did an enormous amount of research in the development of the theme, Mathematics; Al Orellana, Copy Editor; George Kovacsevics, Photo Editor; Eugene Kelly, Publicity Manager; and Ed. Thorsen, Sports Editor.

While all these members of the board carry very official-sounding titles, each one contributed his share when there was work to be done by any other member. Particularly noticeable in the making of the 1935 Cable was the cooperation and accord among the various members of the staff. This yearbook stands as a monument to "All for one and one for all."





ABRAHAM PATT  
Editor-in-Chief



LOUIS J. SCHRAMM  
Business Manager

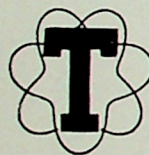
## THE PIONEER

BOARD OF CONTROL

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GEORGE NAGOSHINER  
ABRAHAM PATT

JOHN P. ROULETT, JR.  
A. BYRON GREENBERG



THE year 1934-35 was a critical one in the history of the Pioneer. Publication of the thirteen-year-old school paper had been completely suspended for a year, and the current year's staff was consequently forced to start virtually from scratch. With no money, no office, very little equipment, and almost no experience, the staff was not able to publish its first issue until almost a month after school opened.

After the third issue the paper was further handicapped by the loss of Harold Albert, Editor-in-Chief, who was forced to resign by pressure of outside duties. Abraham Patt, Associate Editor, took over Mr. Albert's duties; A. Byron Greenberg, Managing Editor, moved up to fill the position vacated by Patt; H. Jack Sonberg became Managing Editor; and Louis Schramm continued as Business Manager.

But in spite of its slow start the Pioneer has had a successful year. A small reserve remains in the treasury, thanks to Mr. Schramm's excellent handling of the finances; the equipment has been well supplemented; and a considerable amount of valuable experience has been gained by members of the staff.

Of news there has been no scarcity. The activities attendant to the opening of a new school year . . . the tragic death of R. Fulton Cutting, president of the Board of Trustees . . . the growing popularity of intramural sports to replace the intercollegiate sports for which our students have so little time . . . the organization of the Glee Club . . . the crisis in Cable affairs as student support seemed for a time to be insufficient to allow of publication . . . all filled the Pioneer's pages.

Then followed the Tekart dances, one of the few co-operative efforts on record between the day tech and art schools . . . the inauguration in the Day Tech of a course in Social Philosophy, given by Dr. Everett Dean Martin, head of the newly created Department of Social Philosophy (a step noteworthy as the introduction to the engineering courses of the humanites) . . . The election of Gano Dunn to replace the late Mr. Cutting, and of Barklie Henry as a new member of the Board of Trustees . . .

The Blanket Fee plan to subsidize all extra curricular activities virtually monopolized space in the Pioneer for several weeks . . . In a student referendum the Fee carried both Engineering Schools, and parts of the Art Schools.

Founder's Day exercises . . . the spring recess . . . and then conventions became the mode. Cooper Union played host to the American Society of Mechanical Engineers; Chemical Engineering students participated in the American Chemical Society Tercentenary convention; and Electrical Engineering students presented papers at an A.I.E.E. student branch convention . . . and then, to end the term, came the Annual Dance, the Gold "C" awards, and the election of a new Pioneer staff.



## THE PIONEER



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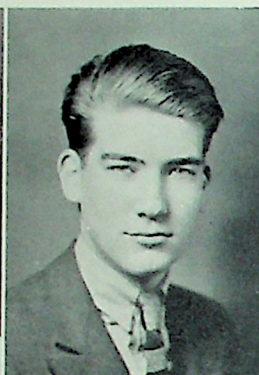
DAVID J. KLEIN  
Production Editor



# THE PIONEER



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Columnist



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Sports



FREDERICK HAHN  
Copy



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Columnist



E. KING STODOLA



ROBERT GUNDLACH  
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PETER R. KALDOR  
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FRANK J. SCHMIDT  
Night News Editor



ALLISON SCOTT  
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STEPHEN PHILLIPS  
Advertising Manager



NATHAN WALD  
Night Circulation



MINNA ADAMSON  
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## 1935 HONOR AWARDS

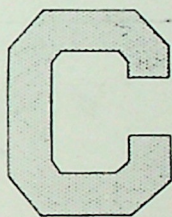
### DEAN'S AWARD

William P. Reuss

### SILVER C AWARD

Herman A. Folgner

GOLD



AWARDS

NICHOLAS APOSTOLOU  
IRWIN DLUGATCH  
JAMES J. GILL  
A. BYRON GREENBERG  
HELEN HENSCHER  
AGNES KARLIN  
GEORGE M. KOVACSEVICS  
GEORGE KLIGFIELD

JOHN B. MAYER  
CHARLES MIKULKA  
GEORGE NAGOSHINER  
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#### COMMITTEE MEN

|                 |                  |
|-----------------|------------------|
| S. MARTIN NOBLE | WILLIAM P. REUSS |
|-----------------|------------------|





## EX POST FACTO

1936

Milton T. Way  
CHAIRMAN

Nicholas Apostolou  
Irwin Dlugatch  
Aldo C. Frattini  
James J. Gill  
Eugene A. Kelly  
George Kligfield  
George M. Kovacsevics

Harriet H. McNutt  
Ildefonso G. Orellana  
Reuben Orlansky  
Albert V. Russo  
William Schneeberg  
T. Edward Thorsen  
Max Yesowitz

1935

William P. Reuss  
Chairman  
Francis E. Knipper

1931

George A. Crowther  
Chairman  
James W. Phillips

1934

Jack R. Miller  
Chairman  
Stanley J. Zawadowicz

1930

Joseph F. Fody  
Chairman  
Sven E. Stromberg

1933

John T. Carroll  
Chairman  
Elias Robinson

1929

Chester E. Voorhis  
Chairman  
Herbert Laber

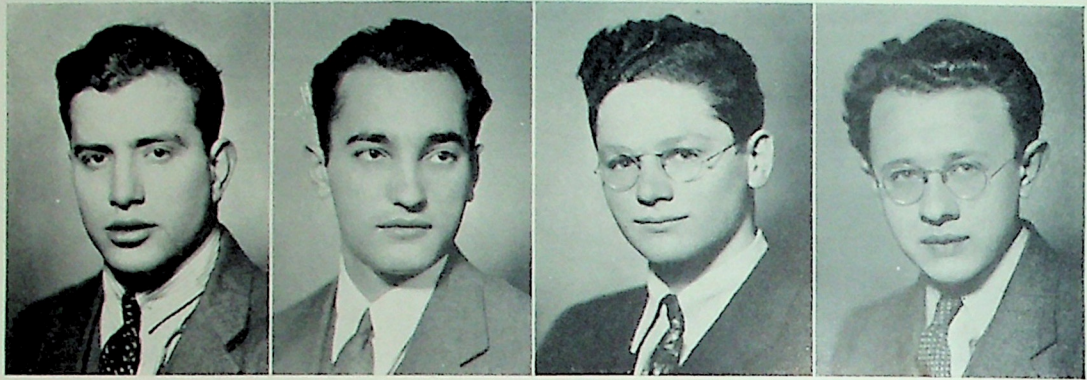
1932

Ernest S. Lundie  
Chairman  
Jeremiah A. Musilek

1928

Eugene W. Brass  
Chairman  
Alexander Johnson





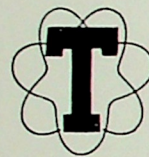
J. GLADSTONE  
President

S. ZEITZOFF  
Vice-President

T. REFF  
Secretary

B. GOUGELLE  
Treasurer

## THE MATHEMATICS CLUB



THE Mathematics Club stands in a position quite apart from all other organizations in the Cooper Union. Unlike the various professional societies whose memberships consist of persons studying the particular branch of Engineering involved, this organization does not confine its membership to those whose ruling passion is mathematics.

The Club's program of lectures serves to introduce to the neophytes in engineering all the branches and methods in mathematics of which he should have at least superficial knowledge. These lectures are very carefully limited in scope. The *raison d'être* of each one being not to give the student an elementary course in a phase of mathematics but to so acquaint him with it as to enable him to follow up the subject if he is interested or to be able to say "Well, I've heard of that," even if he isn't.

The lectures are arranged so that about one-half are given by members of the club and the other by outside speakers. The members are afforded a service by being given the opportunity to lecture on any pet subject which involves mathematics. This practice is invaluable in the student's scientific training for it teaches him just how to put material across to his listeners, with sufficient vigor to make his lecture worthwhile and yet without boring them.

This year the policy was adopted of having lectures arranged, first by those of interest only to Freshmen, then others of more advanced nature; and thirdly those of general interest, requiring very little knowledge of mathematics.

The organization cooperated with other Math clubs of the city, in particular the Hunter College Math Club, with which a system of exchange lectures was inaugurated.

Another service of the Math Club to the students is in the maintenance of a library of books on mathematics otherwise unavailable. These books may be used for as long a period as desired.

This year the Math Club contemplated its second edition of its bulletin. This was to have contained three papers by Cooper students, all original and previously unpublished. Unfortunately this issue has been postponed until next year.

Thus for an investment of one hour every other Tuesday the student is given an opportunity to orient himself in mathematics, a chance to address his fellow students and air his views, and the use of a special mathematical library.



## THE NEWMAN CLUB

"COR AD COR LOQUITUR"

|                           |                         |
|---------------------------|-------------------------|
| GEORGE F. ACKERT .....    | President               |
| LOUIS J. HEFELE .....     | Vice-President          |
| JEAN AMICARELLI .....     | Recording Secretary     |
| JOHN DONATO .....         | Lecturer                |
| ALOYSIUS MILUSICH .....   | Treasurer               |
| HELEN JAHANNSEN .....     | Corresponding Secretary |
| RAYMOND F. KUNZ .....     | Faculty Adviser         |
| REV. JOHN J. CORLEY ..... | Chaplain                |



FOR TWELVE YEARS, since its organization, the Newman Club has ranked as the leading student organization in Cooper Union. Deriving its name from the eminent Cardinal Newman, the club aims to further the spiritual and intellectual, as well as the social welfare of its members. Its motto, "Cor ad Cor Loquitur", (As Heart Speaks to Heart) more fully expresses its purpose. The club is a member of the Federation of College Catholic Clubs, representing one hundred and forty-six colleges in the United States, Canada and Hawaii.

The regular calendar of the year calls for a regular business meeting once a month, these meetings being held in Newman Hall on the Columbia University campus, and any number of extra social functions throughout the school year. This past year's activities included a skating party in "Philadelphia Jack" O'Brien's gymnasium, an open-house party held in the Omega Delta Phi rooms, and a card party in the Grill Room of the Hotel Taft.

The Cooper Union Newman Club annually plays an important part in the New York Province Convention, and it is hoped that one of our representatives will be present at the International Convention at Toronto, Canada, this coming June.



## THE GLEE CLUB

DEAR FELLOW CHIRPER,

Cooper Union  
N. Y. C., 1935

In September, 1934, a certain Miss Erica Gorecki, Day Art student, could be found watching Mr. Purves carefully. She was mustering up courage to speak to him of something. Finally when she had it, she entered his office and popped out with an idea about starting a glee club in school. Mr. Purves pounced on the thought and promptly urged her to canvass for members and said that he would try to make arrangements through the Henry Street Settlement for a leader.

Erica was then seen scurrying around the sixth floor during painting or architecture class and doing a great deal of "ogling." She would approach some fellow and lisp something about a glee club after school into his receptive ears, whereupon he would find himself signing a petition.

Mr. Purves called an assembly of all signees in Mr. Beck's classroom, but was sadly disappointed to find that comparatively few turned out, so he leaned himself against an easel and over a chair (another one of the arts he has mastered) and proceeded to deliver a pep talk in his own inimitable way. The sum total of his speech was that he had a desire to see "the entire business as a cultural venture and a success."

Erica thereupon "ogled" doubly hard and had about forty or forty-five aspirants at the next meeting called by Mr. Purves. He, in turn, had brought a Mrs. Katz, music director of the Henry Street Settlement, and Mr. Ziegler, the man to lead the new group.

Mr. Purves, finding the easels put away in good order sought out a table, sat on it, and again delivered a speech. He stated that "good music is necessary to the artist's experience (he did not mention the engineers). We don't care what kind of music it is, religious, opera, or anything as long as it's good stuff."

Mrs. Katz was the next speaker. She mentioned her connection with the Henry Street Settlement as music director and that music clubs in the Settlement were recognized as fine organizations. She had procured Mr. Ziegler to direct the Cooper Union Club in the hopes of its also becoming a fine association.

Mr. Ziegler, a stocky gentleman stood up, brushed those temperamental hairs from his forehead and said in a charming accent: "I'm willing to direct you every Wednesday afternoon if you will work with me regularly -- if not I will give it all up right away. We must make this a fine job and I'm sure we'll have a lot of fun."

Thereupon the entire assembly rose up in a body, swarmed Erica, and scribbled their "John Hancocks" to a list of allegiance.

The first meeting of the association had quite a turnout. A certain Miss Hurley hurled music theory -- staves, notes, G clefs, tempos, and phrases at a bewildered Glee Club. At the end of a half hour of technical lessons, a few talented geniuses gathered their wits and decided that Miss Hurley's teaching concerned something about music. Then elections were held. Erica took the floor, glanced at the boys in the back rows, and asked for nominations for president, upon



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which she was elected for the position unanimously -- and took the floor again. An engineer stood up and nominated Mr. Hope, of the Engineering School, for faculty vice-president. Mr. Hope declined even though one of his students vouched for his honesty and integrity as an instructor. Professor Coull was elected for the office unanimously. Irmgard Doering and your humble correspondent, both of us art students, were also elected unanimously (-- to save time, no doubt) for secretary and librarian respectively.

Finally Mr. Ziegler had try-outs for voice.

After going through all the voices it was found that the Cooper "Minstrels" would not convene, as was expected, and left amidst a hubbub of discussion.

The second meeting was started with the same rapid fire music lessons shot at the unsuspecting students. (This lesson was to be given at the beginning of every meeting.)

Mr. Ziegler introduced the first song to be murdered by the Club. It was Beethoven's "The Heavens Are Declaring," a four part chorus -- very dramatic and virile.

Mr. Ziegler's temperamental hair fell nearly over his right eye. With his right hand he signaled to Erica, who accompanied on the piano -- to begin. He gesticulated in front of the sopranos as if to draw out melodies from within their souls. The result -- a few sour notes.

At the next meeting the voices, the cooperation and range had improved surprisingly. Only this time the bassos started off badly with such ravaging roars as to subordinate to extinction all other voices. -- But with Mr. Ziegler's hissing guidance he hushed them and the Glee Club went practically half way through the song quite peacefully and with increased quality.

Eventually Mr. Ziegler felt that the club was ready for a second song, so he procured the score for a beautiful old English tune, a madrigal, "Come away, come sweet love."

The first meeting after the Christmas Hoildays was a milestone again in the history of the Glee Club. For quite a while up to that time the attendance had been dropping off slightly and Mr. Ziegler asked for a showdown. Professor Coull, faculty vice-president of the organization, spoke and with a slight Scotch tang proclaimed that "the music theory lessons are a bit too lengthy \* \* \* too fast for those having no knowledge of music and boring for those who have."

It turned out that the general vote was that the music lessons preceding the singing be discontinued. And after this action the walls again resounded and echoed words of love and inharmonious reverberations from fifteen or twenty larynxes.

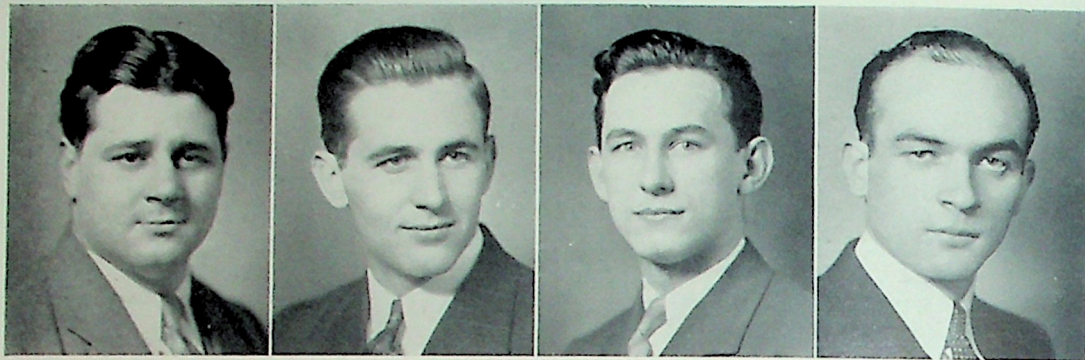
The Glee Club, though much detrimental concerning it has been said herein, has been steadily improving. This is not merely your writer's statement but is Mr. Ziegler's spoken belief.

And so it was that when you heard on Wednesday afternoons gentle strains of what would be music, rebounding through the main corridor of the second floor of the Cooper Union for Advancement of Arts and Sciences, it was the Cooper Union Glee Club striving for perfection in the Art of Music through the Science of Phonetics.

Yours Tenorly,

BOB GUNDLACH, Librarian.





N. STEFANO  
Chairman

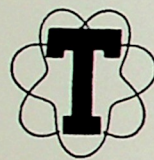
L. FOLTAN  
Vice-Chairman

C. MIKULKA  
Treasurer

M. YESOWITZ  
Secretary

## AMERICAN SOCIETY OF MECHANICAL ENGINEERS

HERBERT F. ROEMMELE, Honorary Chairman



HE Cooper Union Branch of the A.S.M.E. concluded its 1933-34 season by sending George C. Terry to the Second Annual Students' conference held at Drexel Institute. He presented a paper on "Construction of all Metal Pontoon for Airplanes," which was chosen in a competition with other students' papers.

Among these were "Operation of a Newspaper Press" presented by John H. Peterson, "Benson Loeffler Boilers" by Franklin B. Leslie and "Mercury Vapor Process of Power Generation" by Charles F. Gerow. Dean Bateman presented John H. Peterson with a book at the last official meeting, donated by the Parent Society, for his active work.

The 1934-35 season was inaugurated early in November with a meeting at which Nicholas Stefano, was elected chairman. The guest speaker was Dean Bateman who spoke on "How the Employer looks on Student Branch activities."

During the year, the regular program of student talks was carried out. Norman Korn presented a paper on "Atmospheric Pollution," "Vibration, an Engineering Problem," was given by Max Yesowitz, and Jack Drutman spoke on the "Automatic Automobile."

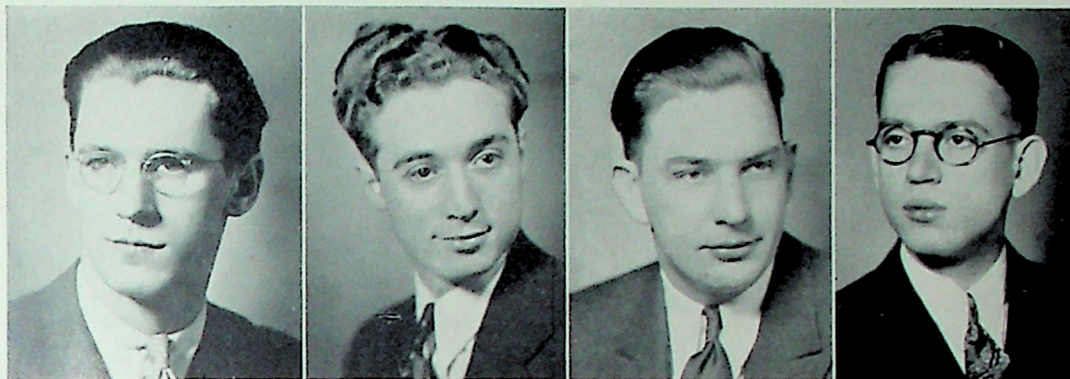
Special interest in these papers has been aroused, because the best will be presented at the Third Annual Student's conference part of which will be held at Cooper Union.

Extensive arrangements are being made to entertain the visitors to this conference by representatives from the Student Branches of Cooper Union, New York University, City College of New York, Brooklyn Polytechnic Institute, Pratt Institute, Newark College of Engineering, Columbus College of Engineering, and Stevens Institute of Technology.

At the technical sessions of the conference, chosen speakers from each of the eighteen member colleges will present papers in competition for prizes that will be awarded to the authors of the three winning papers at the banquet tendered by Cooper Union.

It is hoped that the new year will see a renewal of the joint meetings held by the A.S.M.E. and the other professional societies that have been so popular in the past.





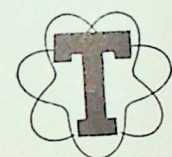
J. MAYER  
Chairman

S. SOTTASANTI  
Vice-Chairman

L. BOLLMAN  
Secretary

F. BAPTISTA  
Treasurer

## AMERICAN SOCIETY OF CIVIL ENGINEERS

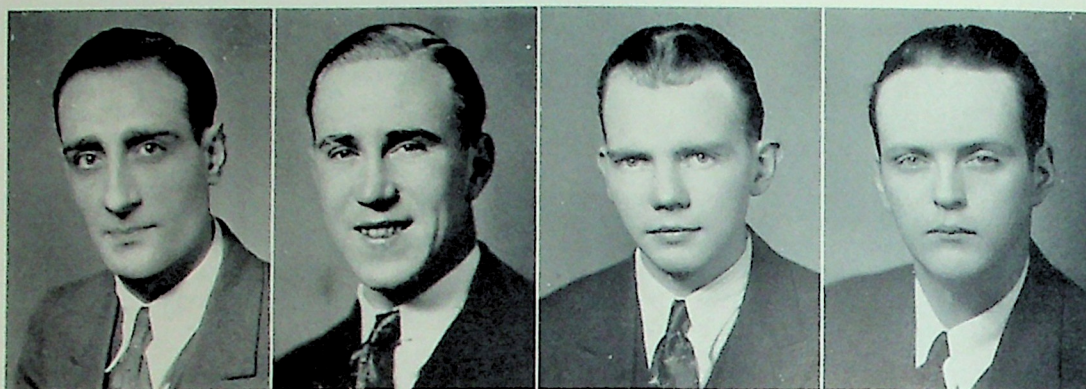


THE functioning of the Student Chapter of the American Society of Civil Engineering as the normal outlet for the things that are in the mind and heart of the Civil Engineering student is the prime purpose of this organization. Through the helping hand of the Civil Engineering Department, especially Professor Foss, the student chapter has rapidly increased in strength from a membership of fifteen at its inception some twenty years ago to a present membership of a hundred. The Student Chapter forms the link between the theory of classroom and textbooks and the realities, problems, and achievements of practical men, who have met their problems and conquered them.

At the many meetings the student gains an unexcelled knowledge in engineering which cannot be grasped by instruction or by the reading of books. The members all of whom have identical aspirations, can make known their opinions and get into the atmosphere of good fellowship which prevails. The papers and addresses delivered during the year covered the subjects of Sewers, Steel Construction and Subways. C. P. Richmond, Jr., assistant secretary of the American Society of Civil Engineers, spoke on the principles and ethics of the society. Sewerage and its treatment was ably discussed by W. L. Sylvester at one of the meetings. Problems which crop up in steel construction work was the subject of a talk by John Pickworth, and Mr. Bento spoke on Subways. The annual convention of the American Society of Civil Engineers and the convention of the New York Student Chapters were attended with great interest by the student members as one of the major events of the season.

The Civil Engineering student learns the intricacies of the profession at the meetings, which he can later apply to the problems of far greater magnitude than he can now realize.





J. COSTA  
President

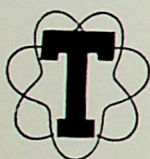
W. SLACK  
Vice-President

A. LANDSVERK  
Secretary

C. GORMAN  
Treasurer

ABRAHAM J. B. FAIRBURN, Counselor

## AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

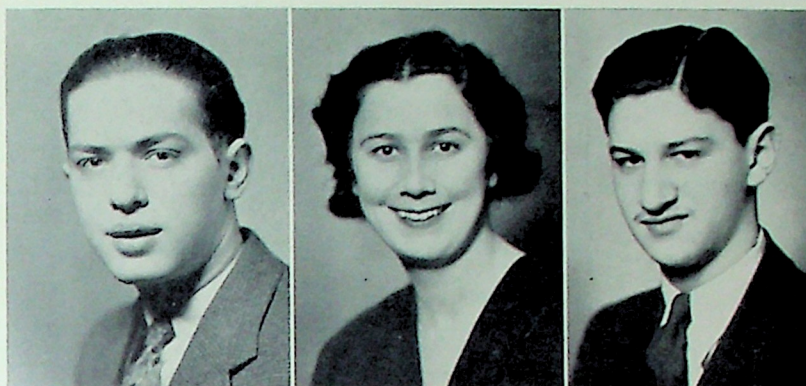


THE Night Division of the Cooper Union Student Branch of the American Institute of Electrical Engineers has been in existence for only one year. In this short time its membership has increased to such an extent that it is one of the largest of the Student Branches of the Institute. The reason for this is evidently due to the fact that the Electrical Engineering student realizes the importance and desirability of having a membership in this organization.

Every electrical engineering student who hopes to follow a career of accomplishment must acquire the ability of applying the theoretical knowledge he has gained during his course of study to the practical problems that he may undoubtedly encounter in his chosen profession. It is the object of this organization to instill in the student a keen interest in the electrical industry by unfolding to him, by means of lectures and discussions, the developments in electrical engineering, and thus enable him to obtain an understanding of the methods applied and the difficulties encountered in practice. This knowledge will help him to form a definite decision in regard to the field which will be the most suitable for him to enter.

Electrical engineering students who have completed the first half of their course are eligible for student membership in the National Society. However, branch membership is open to all students of the Night Engineering School. Student members may take advantage of the benefits and privileges offered by the National Institute; they are permitted to use the Engineering Societies Library, attend lectures and inspection trips offered by the National Society, and receive the publication "Electrical Engineering" at a very reasonable price.



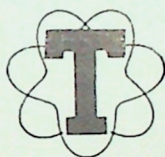


M. PISETZNER  
President

M. ROSS  
Secretary

J. MALTZ  
Treasurer

## AMERICAN INSTITUTE OF CHEMICAL ENGINEERS



THE Cooper Union Student Chapter of the American Institute of Chemical Engineers, successor to the Cooper Chemistry Club, was chartered in 1928 by the parent organization. It has now completed its seventh year.

The chapter originally included both Day and Night students in its membership, but the meeting hours this arrangement entailed, invariably proved awkward to members of either one or the other of the schools. Consequently, the Institute of Technology chemical engineers separated from their Night school associates in 1932 and formed a separate branch.

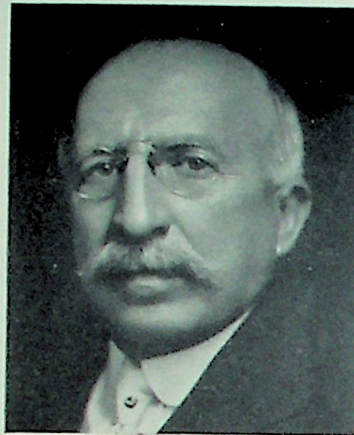
The Night school organization languished and died, and for a time the other seemed headed for the same fate. But, in 1933-34, a vigorous program of activities (including a joint meeting with the New York University chapter at the latter's campus) awakened it from its lethargy. At present, the membership is close to fifty, and the night school gang is being reorganized.

The program during the past year has been quite varied. In November, twenty members attended a meeting of the various students' chapters of the Metropolitan area, held at the Newark Athletic Club. Just before Christmas, the elaborate freshman reception was held, at which the prize for excellence in scholarship, given by the senior organization, was awarded to Fred Hashmak. The entire Senior Class participated in the annual student problem contest of the American Institute of Chemical Engineers. Finally, in April, the Seniors attended the centenary convention of the American Chemical Society at the Hotel Pennsylvania. They acted as ushers and received free tickets to the "Great Waltz" at the Center Theater.

In addition to these highlights, the Chapter held its weekly meetings, at which they were addressed by students, or by prominent chemists or chemical engineers. Among these was a lecture on "Brewing" by Christian Weaver, of the Brewer Academy, one on "Recent Advances in Chemical Engineering", by the Editor of Chemical and Metallurgical Engineering, one on "Chemical Engineering in the Textile Industry", by O. Hongen, a writer of well known textbooks, one on "Perfumes" by Charles Leyes, a student and a most gruesome and soul-curdling exposition on the properties of "Poisons", by Mr. Henry Hope, of our own Department of Chemical Engineering.



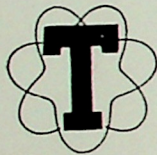
WILLIAM H. WAGNER '03  
Vice President



HENRY D. WILLIAMS  
President

ALFRED HILBERT '01  
Secretary and Treasurer

## THE ALUMNI FEDERATION



THE Alumni Federation is composed of the Alumni Organizations of the General Science (Mechanical and Civil Engineering); Electrical Engineering; Architecture; Chemistry, and Institute of Technology Schools.

The work performed by the Federation Committee is primarily the management of the Alumni celebrations on Founder's Day, the decoration of the grave of Peter Cooper, the decoration of the monument of Peter Cooper in Cooper Square, and the decoration of the bust of Peter Cooper in the Hall of Fame.

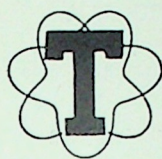
A movement is now under way for a further reorganization to coordinate the activities of the Alumni, by forming a new Cooper Union Alumni Association to be composed of graduates of all the departments of Cooper Union, with associate members consisting of all ex-students who shall have left in good standing and whose classes shall have graduated. This organization is to have an Executive Secretary who shall be editor of all publications of the Association, these to include an Alumni periodical.

It is planned that this new Cooper Union Alumni Association shall be the only dues-collecting organization and that the present member associations shall become chapters of this organization, each chapter to be supported by a portion of the dues collected from its members by the Association.

Whether this plan is carried to a conclusion or the present organization is continued, the work which Alumni can and should do will be carried on. The objects stated in the Constitution of the present Federation and substantially repeated in the proposed Constitution of the Cooper Union Alumni Association, are "to uphold the spirit of good fellowship and mutual help among all who have its (Cooper Union's) interests and welfare at heart, to cooperate with the Trustees in all ways possible to increase its facilities and power for good in the community and so to advance the ideas of the **Founder.**" These will continue to be the objects of the associated Alumni of Cooper Union.



## GENERAL SCIENCE ALUMNI ASSOCIATION



THE Cooper Union General Science Alumni Association is the time-honored fraternal organization of the Cooper Union, being the continuation of the original Cooper Union Alumni Association, the designation "General Science" having been inserted later to distinguish it from other specific alumni bodies. It was among the graduates of the Scientific Course in the 13-year period from 1864 to 1877 that the first Cooper Union Alumni Association was formed.

In addition to the active membership, there were associate members, those who had attended three years of the Scientific course. The Association gradually grew in membership and was incorporated in 1895. By inviting the graduating class each year to an annual function which usually took place in the early part of June after commencement, it secured most of the graduates as members.

The Association continued to grow for fifteen years into an organization increasing in numbers and activity. Annual dinners were held on Founder's day under the auspices of the Association. Monthly meetings with instructive addresses and lectures were held during the school term. The Association also established its own library and formed the Cooper Union Glee Club which flourished for a few years.

The Cooper Union General Science Alumni Association has contributed in recent years toward the cost of decorating the bust of Peter Cooper in the Hall of Fame and the statue of Peter Cooper in Cooper Square on Founder's Day and decorating the grave of Peter Cooper on Memorial Day, besides making annual contributions to the Alumni and Associates Fund.

The Association has a nominal or eligible membership list of approximately 1350 graduates from the General Science course, while the active membership list of dues-paying members is about 400.

Among recent activities of the Association is the sponsoring and financial supporting, in connection with other Alumni bodies, of a gymnasium and swimming pool in the Christodora House for the Athletic Association.

These ventures of the Alumni Association are designed to further extra curricular activities and to instil more school spirit in the hearts and minds of the under-graduate. This in time should help provide, in the future graduate or alumnus, that which seems to have been lacking in the majority of those who graduated in the past, and by whom the welfare of their Alma Mater has probably been entirely forgotten.

At the annual dinner and reception in June, 1931, our beloved Dean Bateman was installed as an Honorary Member of the Association. Professor Bateman was graduated from the Day School, but he has always had a place in his heart for the Night School and its Alumni.

At an Executive Committee meeting in October, 1933, a definite proposal was offered for a United Cooper Union Alumni Association to embrace all the graduates of Cooper Union and thus to provide an opportunity for those graduates who now have no specific alumni association of their own departmental course to join the general body.

This proposal has taken definite form and at the present time the various alumni associations which are to form the basis of the proposed new Cooper Union Alumni Association, are considering a tentative Constitution and By-Laws which will probably be adopted in the fall, after which any graduate, no matter what course he may have attended, will be eligible to membership.



FRANK SPITALERI '25  
President

LESTER KENWORTHY '30  
Vice President

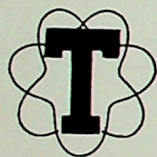


FRANK SPITALERI

CARL BUSSOW '22  
Secretary

ARTHUR KAPPLER '30  
Treasurer

## CHEMICAL SOCIETY



THE Society was organized in 1894 for the purpose of promoting good fellowship and scientific discussion among the alumni and seniors of the Chemical and Chemical Engineering Courses.

To carry out these purposes the Society holds an Annual Dinner in January and combination smoker and business meetings in May and November. It holds lecture meetings monthly during the college year at which men expert in some particular field talk about their specialized phase of chemical industry and answer any questions put to them by their audience.

The following is a list of lectures held during the past year.

| SPEAKER                     | SUBJECT                                                           |
|-----------------------------|-------------------------------------------------------------------|
| Prof. H. C. Enders.....     | Is it Engineering?                                                |
| Prof. Christian Weaver..... | Malt, Its Preparation, Structure, and Function in Brewing.        |
| Prof. Christian Weaver..... | Brewing.                                                          |
| Edward Schmidt .....        | The Manufacture of Lubricating Greases.                           |
| Carl Bussow .....           | Fractional Distillation.                                          |
| Joseph Mattielo .....       | Varnishes and Lacquers.                                           |
| Herbert Rothschild .....    | Cosmetics, Their Preparation and Properties.                      |
| Col. A. Gibson.....         | Chemical Warfare, Its Development During and Since the World War. |
| Maxwell James .....         | Patent Law for the Chemist and Engineer.                          |

The Society awards cash prizes to the best student in chemistry in the second year of the Day Chemical Engineering Course and to the best student in chemistry in the third year of the Night Chemical Engineering Course.

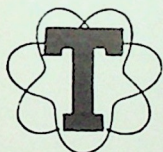
In addition to its activities with chemists and chemical engineers, the Society cooperates with the other Alumni Societies through the medium of the Alumni Federation of Cooper Union.





GEORGE FRIEDL, '28  
President

## ELECTRICAL ENGINEERING ALUMNI ASSOCIATION



THE Electrical Engineering Alumni Association of Cooper Union was reorganized on December 16, 1927 after a lapse of several years, and on that date a new constitution and set of by-laws was adopted. According to this constitution the objects of the Association are:

First: To unite the graduates of the Electrical Engineering Courses of Cooper Union in the bonds of good fellowship.

Second: To encourage scientific inquiry and promote interchange of information in the Arts and Sciences.

Third: To cooperate with the Board of Trustees of the Cooper Union and its various Alumni and Student Bodies in achieving the ideals of the Founder.

In order to attain the first object of the Association one social meeting is held each year to which the senior Electrical Engineering classes are invited. At this meeting no serious business is taken up, instead it is featured by games and refreshments. The Association also supports the Annual Founder's Day Celebration.

To carry out the second objective, the Association holds several meetings each year. A paper is presented by a member at these meetings on a subject with which he is familiar and which is of general interest. Places of general interest to Electrical engineers are also visited.

Further, to fulfill the third object, a delegate represents them in the Alumni Federation of Cooper Union. The officers by their actions set an example, which being followed by the members results in graduates of Cooper Union being respected, to the full meaning of the word, and thus achieving the ideals of Peter Cooper.

In addition to the stated objects of the Association an effort is being made to set up a permanent fund. The aim of this fund is to supply a definite amount of money each year as a prize to be awarded, to a student selected by the faculty, who is most proficient in the course on "Alternating Current Circuits."

Mr. George Friedl, Electrical Engineering '28, has been president since 1934.



PHILIP S. ANTHES, '33  
President

THOMAS B. DICKINSON, '33  
Vice-President



PHILIP S. ANTHES

LESTER J. DAVIS, '32  
Secretary

BERTRAM J. BERTOLAMY, '31  
Treasurer

## ARCHITECTURAL ALUMNI

### EXECUTIVE COUNCIL

CHARLES SCHAEFER, JR., '92    WILLIAM H. WAGNER, '03    PHILIP S. ANTHES, '33



ALTHOUGH the Architectural Alumni of Cooper Union is known as the Architectural Chapter of Cooper Union Alumni, it still carries on with the same ideals of previous years.

The chapter extends its heartiest congratulations to all the men of the Architectural course who have made such wonderful records for themselves in the business world. To the others is offered wishes that they be as successful as many of our men have been in the past.

The members of the Chapter, who served on the Executive Council, Executive Board, and Special Committees, have worked very diligently to make this year a success and they have more surprises for the future.

The chapter activities briefly were as follows: In September, October and November, the meetings were devoted to business, open discussions and planning the program for the 1934 season.

In December, the members enjoyed a real treat by celebrating with a social in a nearby cafe. Two of our members entertained with musical instruments. A good time was had by all.

A tour was next on the schedule for January 1935 and it proved to be very profitable. The men went through the 50th St. Building of the New York Telephone Company. After touring the building, an Engineer from the Company then gave a lecture on telephone work. It was both interesting and valuable.

February proved to be a busy month. The first meeting was devoted to business; then the Chapter turned its attention to Founder's Day, February 12th. Messrs. Wm. Wagner and P. S. Anthes played a big part in the celebration for this chapter. The third meeting of the month was for election of officers.

The tentative schedule for the months of March, April, May and June are as follows: Several meetings, a few socials and a drawing contest and, finally, a dinner for the termination of the 1934-35 season.

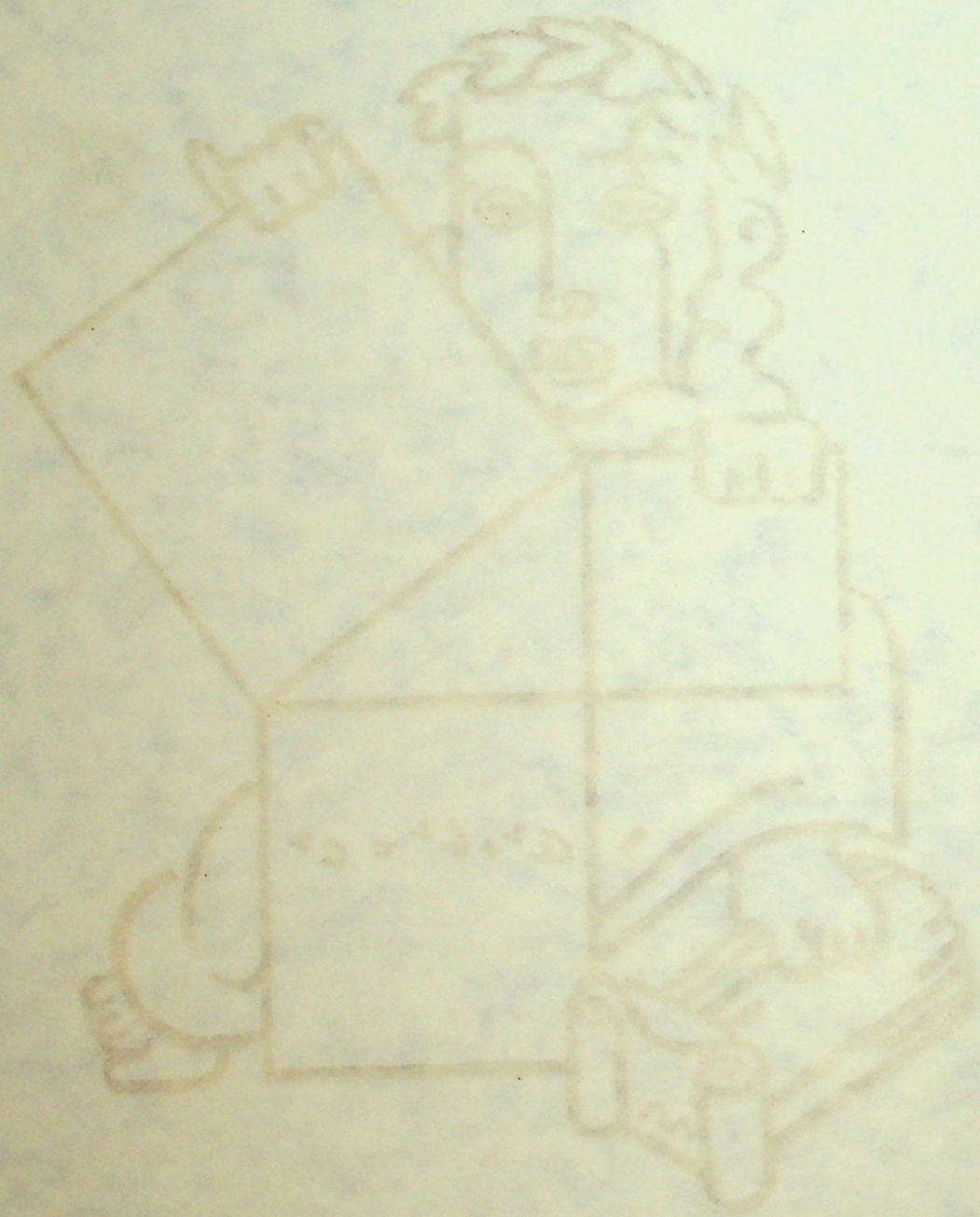
The Officers take this opportunity to thank every member for his co-operation in making the 1934-35 season a huge success and they hope everyone has a good vacation this summer and comes back in September full of ideas.





FRATERNITIES







## THIS IS MY FRATERNITY

Here I find an opportunity to be frank and open in the expression of my true self; but if in so doing I digress from the highest standards of society, I know that my brothers will not cease to guide me.

Here I work and play in the advancement of a common good.

I realize it is no credit to me to be a part of an organization which does not lift me up beyond my normal self. I know that the ideals of my fraternity are such that if I strive to attain them I shall be lifted up.

May I ever be mindful of the relationship I hold to my fraternity. As a member I owe it allegiance. I must work for its welfare, support its institutions, and live within the bonds of true fellowship and brotherhood.

I AM THE FRATERNITY



## OMEGA DELTA PHI



### CHAPTERS

|              |                                         |
|--------------|-----------------------------------------|
| ALPHA.....   | Cooper Union Night School               |
| BETA.....    | Brooklyn Polytechnic Institute          |
| GAMMA.....   | School of Commerce, New York University |
| DELTA.....   | Cooper Union Institute of Technology    |
| EPSILON..... | Brooklyn College                        |

In 1903 seven men attending the schools of Cooper Union felt the need for closer relation between students after regular school hours, and in order to fulfill this need, banded into a Fraternal order which was the first to exist in Cooper. Their ideals were incorporated in a constitution which has been lived up to by the Fraters for the thirty-two years of the organization's life, and their principles of Fraternalism have been extended so that there are now five chapters in New York colleges, the last one, Epsilon Chapter, having been annexed during the school year of 1933-34.

The calendar of the Fraternity includes a monthly meeting, held on the first Friday of each month, two Formals, numerous Open-House nights and entertainments, and an Annual Convention, so that the best of Fraternal and Social life is provided, as desired by the founders.



# T H E \* C A B L E \* O F \* 1 9 3 5

## FRATERS IN FACULTATE

PROF. HENRY C. ENDERS

PROF. KARL HAUPTMANN

C. GEORGE KRUEGER

RAYMOND KUNZ

OTTO G. PULLER

## FRATERS IN COLLEGIO

GEO. F. ACKERT

FRANK W. ALBRECHT

FRANK AUSSENHOFFER

FRED A. BECKER

ARTHUR W. BURKE

EDWARD H. BURGER

JOSEPH F. COSTA

ALFRED E. DANNER

FRED EMIGHOLZ

WILLIAM FITZPATRICK

HERMAN A. FOLGNER

THOMAS J. FRASCELLA

CHARLES E. GORMAN

JOHN O. GUMBRECHT

WILLIAM HARATONIK

LOUIS J. HEFELE

EUGENE A. KELLY

WALTER C. KLUZ

GEORGE KOVACSEVICS

CHAS. N. LOEFFLER

JOSEPH LOVAS

JOHN MORRISSEY

FREDERICK G. MUHLSTEFF

LEO T. McGUIRE

JOHN J. McNERNEY

C. RAYMOND NELSON

ILDEFONSO G. ORELLANA

GEORGE M. PHILLIPS

ANTHONY PINTO

ROSARIO PREVITI

JOHN A. ROBERTS

FRED W. SCHMITZ

T. EDWARD THORSEN

MILTON T. WAY





## PHI SIGMA OMEGA



|                          |                    |
|--------------------------|--------------------|
| Grand Master.....        | William P. Reuss   |
| Deputy Grand Master..... | Frank A. Tracey    |
| Recorder.....            | Raymond K. Kilmer  |
| Exchequer.....           | Francis E. Knipper |

With this, the 1935 CABLE, Phi Sigma Omega records another year of pleasant successes in scholastic and social affairs.

Having full understanding of their responsibilities to themselves, their education, their school and their fraternity, P.S.O. men are glad to say that the fullness of the year's time was utilized with no loss of sociability. Remarkably, time was had for everything and true to tradition all was accomplished with grace and social gain.

Reviewing some P.S.O. history it is surprising to note that since the inception of the fraternity, P.S.O. men have held Cooper Union leadership in the following positions: Cable Editorships, 6; Cable Officerships, 20; Ex Post Facto, 23; Class Presidencies, 32; Other Class Officerships, 53; Dance Chairmanships, 2; Dance Committeemen, 28; Athletic Organization Officerships, 8; Newman Club Presidency, 1; Pioneer Staff, 7; besides 19 Gold "C" men and a valedictorian and also scholastic prize winners. Most of the P.S.O. men who have graduated are now successful in the business world proving that Cooper and P.S.O. were not in vain. Still carrying on, these men have established the trusteeship known as the Alpha Foundation, the funds of which will purchase a fraternity house in the near future where we may carry on our engineering and social activities with greater freedom.

With our hearts unified always we must forge on and true to our tradition, aim to build young freshmen into college men at Cooper.



# T H E \* C A B L E \* O F \* 1 9 3 5

## FRATERS IN FACULTATE

EDWARD A. MILLER  
WILLIAM T. PETERSON

AUSTIN J. PURVES, Jr.  
CHARLES O. ROTH, Jr.

JOSEPH J. TANZOLA  
MILES H. VAN BUREN

## FRATERS IN COLLEGIO

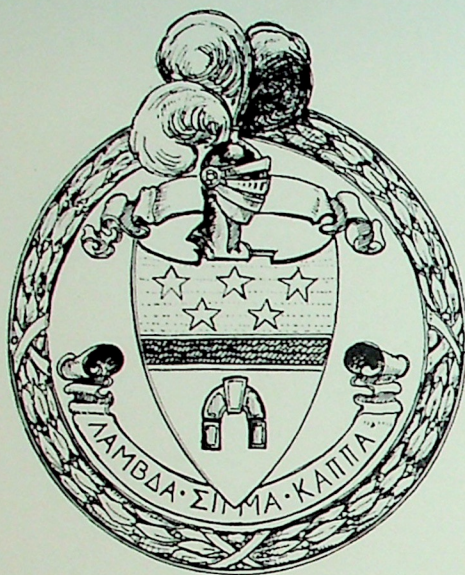
MICHAEL ARUCK  
HERBERT A. BAHRENBERG  
STANLEY E. BERG  
JAMES J. BURKE  
ADAM S. CALLEN  
JAMES E. COFFEY  
FRANK DEL PAPA  
RAYMOND B. DUGUID  
EDWARD J. EZELL  
HERMAN K. FRANKE  
BERNARD C. GALLAGHER  
LOUIS H. GARTLEMANN  
JAMES J. GILL

EMMET G. HAPP  
CHARLES A. HAUCK  
WILLIAM J. HERRICK  
ELBERT W. JAUDON  
RAYMOND K. KILMER  
FRANCIS E. KNIPPER  
ANDREW R. LEVADA  
CHARLES S. LEYS  
LAWRENCE L. LINQUIST  
SAMUEL B. MacWHORTER  
JOHN B. MAYER  
FRANK McGINNIS  
PATRICK H. McGIVER  
JOSEPH E. MICHAELSON

HENRY M. NELSON  
ANTHONY J. NESTI  
WILLIAM PELLEGRINI  
WILLIAM P. REUSS  
JOHN P. ROULETT  
SALVATORE SCAZZARI  
ARTHUR STOLLE  
FRANK A. TRACEY  
THOMAS J. TRAYNER  
FRANK VANEK  
PAUL W. VESTIGO  
WILLIAM F. WEBSTER  
HERMAN N. WOEBKE







## LAMBDA SIGMA KAPPA

In 1905 a group of students of Cooper Union, in order to weld themselves in everlasting brotherhood, founded Lambda Sigma Kappa Fraternity. On this—the thirtieth anniversary of the founding of our great fraternity — we salute those who laid down its foundation.

### OFFICERS

Ruler ..... John P. Nevins  
Vice-Ruler ..... S. Martin Noble  
Scribe ..... Frank LoBue  
Exchequer ..... Herman Levitz

### FRATERS IN FACULTATE

Blandford A. Alger  
Warren G. Findley

Herbert F. Roemmele  
Harold W. Merritt

James P. O'Donnell  
Emanuel A. Salma

### FRATERS IN COLLEGIO

#### ALPHA

Hugo DiGiovanni  
Emanuel A. Drago  
D. Wirth Jackson

Alexander Rapisarda  
John S. Stepsis  
Sidney Kleban

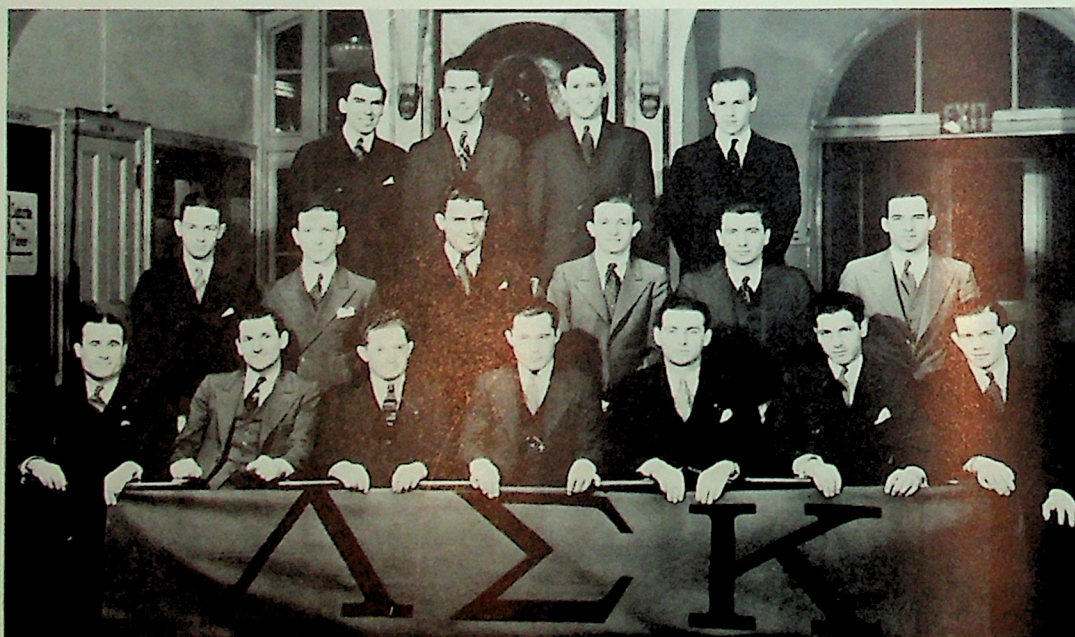
George C. Neuschafer  
Charles Wolf  
George Ratner

#### BETA

Philip S. Anthes  
Nicholas C. Apostolou  
Bertram J. Bertolamy  
Alfred Bobkowski  
Albert J. Clermont, Jr.  
Irving Friedman  
Richard Hopper

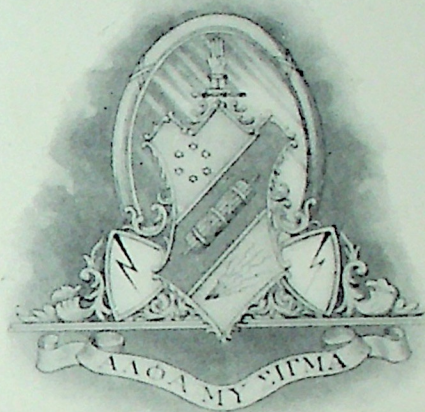
Lloyd Fleishman  
Herman Levitz  
Michael Lisinicchia  
Frank LoBue  
Joseph McDonough  
F. Harry Neidig  
John P. Nevins

S. Martin Noble  
Alvin Pomerantz  
Alfred A. Rathofer  
Irving Rubin  
Carrol Saia  
Frank Spinetta  
Alfred Yacomelli





## ALPHA MU SIGMA



### ALPHA CHAPTER

Prior .....Hyman Milbert  
 Vice Prior .....Arthur Blankstein  
 Exchequer .....Charles S. Begelman  
 Scribe .....Bernard Last

Charles S. Begelman  
 Jack Berger  
 Arthur Blankstein  
 Samuel J. Cohen  
 Joseph Gladstone  
 Paul Hirschman

Norman Iskowitz  
 Arthur Kahlenberg  
 Bernard Last  
 Emanuel M. Lindheimer  
 Werner E. Lindheimer

Nathan S. Lipowitz  
 Hyman Milbert  
 Murray Pisetznr  
 Isidore Rabinowitz  
 Frederick Shapiro  
 Herman H. Weinstein

### CHAPTERS

Alpha .....Cooper Union  
 Beta .....College City of New York  
 Gamma .....Polytechnic Institute of B'klyn  
 Delta .....Massachusetts Inst. of Tech.  
 Epsilon .....Columbia University  
 Zeta .....N. Y. University  
 Eta .....Harvard University  
 Theta .....Bellevue Medical College  
 Iota .....Yale University  
 Lambda .....Univ. of Pennsylvania

Mu .....University of Maryland  
 Nu .....University of Virginia  
 Omicron .....Univ. of Southern Calif.  
 Xi .....Union College  
 Pi .....Long Island University  
 Tau .....Roanoke College  
 Sigma .....Chicago Lewis Institute  
 Kappa .....Boston University  
 Alumni .....New York City  
 Alumni .....Boston



## MU ALPHA OMICRON

Honorary Society, Institute of Technology

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OLAF G. GERDIN  
CARLYLE W. MILLER

HERMAN STEMPER  
NORMAN L. TOWLE  
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MILTON T. WAY

All the art work in this issue of the Cable, including the cover design, was selected from suggestions, submitted in open competition, by students of the Art Schools of Cooper Union. All of these suggestions were meritorious, but some of them fitted in more closely with the theme than others. This work the committee selected and appears in this book.

The following students contributed to the development of this Cable, in that they all submitted art ideas for the decorations used in this book and from their efforts the winning suggestions were selected:

Louis Greenbaum

Theodore Mathewson

William E. Holm

Pauline E. Mater

Louis H. Izzo

Harriet H. McNutt

Dorothy Knipper

Irving H. Papiroff

Louis W. Krackow

Albert W. Radoczy

Of the contributors we wish to commend especially Messrs. Radoczy and Papiroff for their many suggestions and outstanding support.

---

In carrying out the theme of this Cable the designs for each of the initial letters were taken from Polar Equations given in Prof. Moritz's "Study of Harmonic Equations".



# T H E \* C A B L E \* O F \* 1 9 3 5

The 1935 Cable Board is thankful to those students who were not on the Board but who served in even more useful capacities as class sales agents and in securing material for this issue. To them this page is dedicated.

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HOWARD M. ANDERSON  
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CHARLES MIKULKA  
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HENRY WACKER  
NATHAN WALD  
CHARLES A. WESTERSTROM  
HAROLD WETER



T H E \* C A B L E \* O F \* 1 9 3 5

Without cooperation and willing assistance from non-students the work entailed in the publication of this book would have been insurmountable. It is with great appreciation and gratitude that the following persons are sighted for their outstanding helpfulness.

WILLARD SCHILLING  
Schilling Press

OSCAR FIDELL  
Knapp Engraving Co.

HARRY HORTON  
Apeda Studios

Prof. HARRY REDDICK  
Cooper Union

Prof. JEKUTHIEL GINSBERG  
Yeshiva College

E. C. PENTECOST  
Educational School of N. Y. U.

HELEN DRENNEN  
FLORENCE GARABRANT  
SALLY LIPKAHN  
HELENE ROSENBERG

MAXINE SCHNEIDER  
MAURICE C. TATOR  
ROSE THOMPSON  
HANNAH YESOWITZ



## MATHEMATICS IN POETRY, POETRY IN MATHEMATICS

A plus B plus C plus X and square the X  
To the infinite from the infinite infinitesimal  
To the nth root of n to the nth to the nth  
Come radical go rational or e to the nth

All solved?

Arc cosine cosecant tangent or slope  
Circle hyperbola square the ellipse  
Or  $\pi$  or  $y$  or sine or line  
Along the surface plane meet plane

All solved?

Alas for finite Q. E. D.

To demonstrate to mensurate to rhyme  
Seven six five four one two three four or  
Reciprocal secant point and angle  
Unknown constant triangle curve

Infinity!

Diagonal parallel point to point  
The shortest line the longest arc

$A^2$   $B^2$  cycloid  $D^2$  log

Cabalistic parabolic truth

Infinity!

Ah, infinite infinity!

IRWIN DLUGATCH



## NIGHT SCHOOL OF ENGINEERING

### FIRST YEAR—SECTION I

Adler, Hyman.....134 Elliot Place, N. Y. C.  
 Adler, Nathan.....1411-77th Street, Brooklyn, N. Y.  
 Albert, Jack.....23'0 Clarendon Road, Brooklyn, N. Y.  
 Anderson, Howard M.....319 Pearl Street, Brooklyn, N. Y.  
 Aquino, Michael T.....5810-11 Avenue, Brooklyn, N. Y.  
 Arrow, William.....47 B West End Ave., N. Y. C.  
 Aronowitz, Maurice.....104-106 2nd Ave., N. Y. C.  
 Aspler, Sidney.....260 Grafton St., Brooklyn, N. Y.  
 Auer, Oiva.....47-17 39th St., Long Island City, N. Y.  
 Bachstetter, Leo S.....985 Brooklyn Avenue,  
 Brooklyn, N. Y.  
 Banker, Abraham.....109 St. Mark's Place,  
 New York City  
 Barrett, Donald J.....6419 Eliot Avenue, Maspeth  
 Baym, Isaac.....114 Grafton Street, Brooklyn, N. Y.  
 Berger, Jack.....1501 W. 6th Street, Brooklyn, N. Y.  
 Bernstein, Charles.....1016 Bryant Avenue, New York City  
 Bernstein, Solomon.....715 Van Sicklen Avenue,  
 Brooklyn, N. Y.  
 Birnbaum, Saul I.....155 S. 2nd Street, Brooklyn, N. Y.  
 Blacksher, William J.....72 Schermerhorn Street,  
 Brooklyn, N. Y.  
 Blasius, George F.....121 Norman Avenue,  
 Brooklyn, N. Y.  
 Braselmann, Arthur A.....228 Hudson Street,  
 Hoboken, N. J.  
 Braunstein, Jack.....238 Neptune Avenue,  
 Brooklyn, N. Y.  
 Brooks, Gregory E.....478 - 3rd Street, Brooklyn, N. Y.  
 Bruckenthal, Sam.....4719 - 8th Avenue, Brooklyn, N. Y.  
 Burareen, David T.....8 Lewis Street, New York, N. Y.  
 Cammer, Moses.....1701 Nelson Avenue, New York City  
 Carlson, George B.....6114 Avenue T, Brooklyn, N. Y.  
 Castellano, Frank J.....196 Clinton Avenue,  
 Brooklyn, N. Y.  
 Chaber, Oscar D.....1184 Walton Avenue, New York City  
 Chudow, Julius.....114 Maujer Street, Brooklyn, N. Y.  
 Cleland, William.....232 Martense Street,  
 Brooklyn, N. Y.  
 Cohen, Ira B.....422 St. Paul's Place, Bronx, N. Y.  
 Cole, William P.....862 Columbus Avenue,  
 New York, N. Y.  
 Esner, Seymour.....488-A 7th Avenue, Brooklyn, N. Y.  
 Glickman, Cyril G.....3720 Maple Avenue,  
 Brooklyn, N. Y.  
 Krukiel, Edward C.....225 Sandford Avenue,  
 Harrison, N. J.  
 Luther, Herbert G.....631 Hancock Street,  
 Brooklyn, N. Y.  
 McAlister, Roger T.....76 Manhattan Avenue  
 O'Brien, Matthew F.....1770 Mahan Avenue, Bronx, N. Y.  
 Previti, Rosario.....37-32 64th Street,  
 Woodside, N. Y. C.  
 Schneider, Henry W.....580 E. 164th St., N. Y. C.  
 Sills, Gerald.....33-07 83rd Street Jackson Hgts., L. I.  
 Temple, Harry.....2682 Creston Avenue, N. Y. C.  
 Tschupp, Michael A.....291 Devoe Street,  
 Brooklyn, N. Y.  
 Zucchini, Hector.....1400 Palisade Plaza, Hudson

### FIRST YEAR—SECTION 2

Bourke, Joseph W.....1258 Bushwick Avenue,  
 Brooklyn, N. Y.  
 Colen, Irving.....5801 14th Avenue, Brooklyn, N. Y.  
 DeSanctis, Vincent P.....2945 Bainbridge Avenue,  
 Bronx, N. Y.  
 DiMatteo, Charles.....2471 Hoffman Street, N. Y. C.  
 DiMonico, George S.....138 Nelson Street,  
 Brooklyn, N. Y.  
 Dingenthal, Julius.....1265 Walton Avenue, Bronx, N. Y.  
 Dobrin, Albert J.....401 E. 88th Street, N. Y. C.  
 Dobrin, N. Y.  
 Docke, John A.....127 Lake Street, Jersey City, N. J.  
 DuFlon, Alton H.....561 Prospect Avenue,  
 Ridgefield, N. J.  
 Dunay, Paul P.....775 South 17th Street, Newark, N. J.  
 Dworkowitz, Abraham.....1357 Boston Road,  
 Bronx, N. Y.  
 Eckel, Clinton C.....1721 Harmon Street,  
 Brooklyn, N. Y.  
 Eckhaus, Samuel.....1514 West 5th Street,  
 Brooklyn, N. Y.  
 Engel, Jerome.....2A Foxall Street, Ridgewood, N. Y.  
 Esposito, Louis A.....172 Prospect Avenue,  
 Brooklyn, N. Y.  
 Ettinger, Aaron.....908 Sutter Avenue, Brooklyn, N. Y.

Farley, Arthur J.....91-40 81st Street, Woodhaven, N. Y.  
 Feldman, David.....218 E. 165th Street, Bronx, N. Y.  
 Feldman, Samuel.....178 Hart Street, Brooklyn, N. Y.  
 Filce, William H.....235 54th Street, Brooklyn, N. Y.  
 Fleck, Bernard A.....125 Ramsey Avenue, Yonkers  
 Fleisher, Jacob.....4128 18th Avenue, Brooklyn, N. Y.  
 Foust, Chas. W.....1209 Woodruff Avenue, Hillside, N. J.  
 Friedman, Joseph.....4807 8th Avenue, Brooklyn, N. Y.  
 Friedman, Percy.....195 Livonia Avenue, Brooklyn, N. Y.  
 Frisch, Oscar.....838 42nd Street, Brooklyn, N. Y.  
 Fuchs, Jacob.....642 Concord Avenue, New York  
 Gans, Martin L.....2084 Honeywell Avenue, New York  
 Garfinkel, Sidney.....875 E. 179th Street, New York  
 Gasparutto, Frank A.....706 21st Street,  
 Union City, N. J.  
 Gebrian, George.....82 E. 26th Street, Bayonne, N. J.  
 Gilbert, Thomas N.....16 Jefferson Avenue,  
 Maplewood, N. J.  
 Goldman, Isidore.....124-02 Rockaway Boulevard,  
 S. Ozone Park, N. Y.  
 Laursen, Irving S.....1595 E. 45th Street, Brooklyn, N. Y.  
 Lawless, Sydney A.....P. O. Box No. 122, Bellport, L. I.  
 Osciak, George.....336 44th Street, Brooklyn, N. Y.  
 Rendano, Louis.....20 Luqueer Street, Brooklyn, N. Y.  
 Weiss, Max.....1843 62nd Street, Brooklyn, N. Y.

### FIRST YEAR—SECTION 3

Baron, David.....607 W. 180th Street, N. Y. C.  
 Cryan, Lawrence M.....412 Logan Avenue, N. Y. C.  
 Gallagher, Bernard C.....143 Pearsall Avenue,  
 Jersey City, N. J.  
 Geisler, John G.....114 Suffolk Rd., Island Park, N. Y.  
 Gilman, Samuel.....173 Floyd Street, Brooklyn, N. Y.  
 Girmus, Joseph S.....95-09 Woodhaven Court,  
 Ozone Park, N. Y.  
 Gittleman, Hyman.....1835 Bryant Avenue, Bronx, N. Y.  
 Gluckstern, Henry N.....252 Floyd Street, Brooklyn, N. Y.  
 Goldberg, Julius.....565 W. 192nd Street, New York  
 Gormezano, Isaac J.....1915 Southern Boulevard,  
 Bronx, N. Y.  
 Grebert, Charles C.....126 East 60th Street, N. Y. C.  
 Greenberg, Isadore.....2395 Grand Concourse,  
 Bronx, N. Y.  
 Greenberg, Julius.....7119-19 Avenue, Brooklyn, N. Y.  
 Greenhut, Arthur.....1944 63rd Street, Brooklyn, N. Y.  
 Grohse, Edward W.....109-26 131st Street,  
 Richmond Hill, N. Y.  
 Gurnisewitz, Withold H.....67 Orawaupum Street,  
 White Plains, N. Y.  
 Hagerty, Philip E.....514 E. 8th Street, Brooklyn, N. Y.  
 Hampton, William G.....35-54 N. 161st Street,  
 Flushing, N. Y.  
 Haratonik, William.....34-56 30th Street,  
 Long Island City, N. Y.  
 Hartman, Edward.....58 Washington Street, Lodi, N. J.  
 Hashmall, Maurice L.....1141 E. 165th Street, N. Y. C.  
 Hegyi, Imre J.....25-57 33rd Street, Long Island City  
 Herrick, William J.....290 W. 12th Street, N. Y. C.  
 Heun, Gilbert A.....30 Covert Street, Brooklyn, N. Y.  
 Hickey, Frederick V.....8433 106th Street,  
 Richmond Hill, N. Y.  
 Hoban, Francis R.....3515 95th Street,  
 Jackson Hgts., N. Y. C.  
 Hofmann, Edward H.....112 Hale Avenue,  
 Brooklyn, N. Y.  
 Hommes, Walter.....137 E. 19th Street, Paterson, N. J.  
 Horn, Nathan H.....1425 Macombs Road, Bronx, N. Y.  
 Hyden, Joseph.....7520 19th Avenue,  
 Brooklyn, N. Y.  
 Kaercher, Daniel.....167 Sands Street, Brooklyn, N. Y.  
 Kahn, Milton.....2007 Davidson Avenue, Bronx, N. Y.  
 Kalifon, Samuel M.....1760 Montgomery Avenue,  
 Bronx, N. Y.  
 Katz, Hyman J.....287 Division Avenue,  
 Brooklyn, N. Y.  
 Kaufman, Charles R.....225 Decatur Street,  
 Brooklyn, N. Y.  
 Keene, Jack.....1348 Ocean Avenue, Brooklyn, N. Y.  
 Kent, Charles J.....147-23-24 Avenue, Flushing, N. Y.  
 Kessler, Morris.....P. O. Box 511, Morristown, N. J.  
 Kober, Frank K.....1063 East 92nd Street,  
 Brooklyn, N. Y.  
 Kogelman, Seymour.....3881 Sedgwick Avenue, N. Y. C.  
 Leys, Charles S.....193 Washington Street,  
 Freeport, N. Y.  
 Levine, Archie M.....243 Henry Street, N. Y. C.  
 Meyer, William F.....678 Academy Street, N. Y. C.  
 Matich, John G.....906 Willow Avenue, Hoboken, N. J.



# THE \* C A B L E \* O F \* 1 9 3 5

Pollack, Albert ..... 45-35 44th Street, N. Y. C.  
 Steinberg, Max ..... 1371 Prospect Avenue, N. Y. C.  
 Trayner, Thomas J. .... 196 E. 32nd Street, Brooklyn, N. Y.

## FIRST YEAR—SECTION 4

Berg, David W. .... 1130 43rd Street, Brooklyn, N. Y.  
 Conley, Joseph T. .... 1038 Union Street, Brooklyn, N. Y.  
 Dvoskin, Jacob ..... 1198 2nd Avenue, No. Bergen, N. J.  
 Frankel, Abraham ..... 811 New Lots Avenue,  
 Brooklyn, N. Y.  
 Fuerst, Bernard ..... 1921 Lewis Avenue, Brooklyn, N. Y.  
 Glass, Max ..... 718 Gates Avenue, Brooklyn, N. Y.  
 Haratonik, William ..... 34-56 30th Street,  
 Long Island City, N. Y.  
 Koehler, Albert C. .... 93-45 222nd Street,  
 Queens Village, N. Y.  
 Kramer, Marvin ..... 141 W. 101st Street,  
 New York City  
 Krasnow, David ..... 843 Fox Street, Bronx, N. Y.  
 Kraut, Theodore ..... 238 Monticello Avenue,  
 Jersey City, N. J.  
 Krulowitz, George L. .... 663 Powell Street,  
 Brooklyn, N. Y.  
 Kryger, Lester ..... 188 Fourth Avenue, Hawthorne, N. J.  
 Kummer, Oscar ..... 1560 Broadway, Brooklyn, N. Y.  
 LaMagna, Alfred C. .... 2172 E. 2nd Street,  
 Brooklyn, N. Y.  
 Landow, Albert ..... 111 Bay 23rd Street, Brooklyn, N. Y.  
 Larkin, Frank M. .... 492 E. 141st Street, N. Y. C.  
 Larkin, Joseph P. .... 492 E. 141st Street, N. Y. C.  
 Lasky, Benjamin D. .... 107 Division Avenue,  
 Brooklyn, N. Y.  
 Lauer, Irving ..... 107 Post Avenue, N. Y. C.  
 Leiserowitz, Sol. N. .... 229 E. 12th Street, New York  
 Lidz, Sidney ..... 511 W. 130th Street, N. Y. C.  
 Lindquist, Lawrence L. .... 1060 Sheridan Avenue,  
 New York  
 Lubin, Solomon ..... 123 Fountain Avenue,  
 Brooklyn, N. Y.  
 Maas, Robert H. .... 30 Idaho Street, Passaic, N. J.  
 Maccari, Raymond R. .... 444 Himord Street,  
 Brooklyn, N. Y.  
 Mahoney, John P. .... 670 61st Street, Brooklyn, N. Y.  
 Markey, Charles J. .... 30-20 91st Street,  
 Jackson Hgts., L. I.  
 Marsteller, Daniel M. .... 30 Herkimer Street,  
 New Hyde Park, S. I.  
 Martinelli, Joseph ..... 103 Sarford Place,  
 Jersey City, N. Y.  
 McGinnis, Frank ..... 2516 Poplar Street, Bronx, N. Y.  
 McGiver, Patrick H. .... 2406 University Avenue, N. Y. C.  
 Menaker, Morris ..... 271 Fountain Avenue,  
 Brooklyn, N. Y.  
 Rathje, Edward ..... 17 Grant Street, Pleasantville, N. Y.  
 Skrek, Frank ..... 56 Paulson Avenue,  
 Ridgfield Park, N. J.

## FIRST YEAR—SECTION 5

Bartelheim, Geo. J. .... 431 E. 81st St., N. Y. C.  
 Discepoli, Fred ..... 157 E. 108th Street, N. Y. C.  
 Goode, Harry H. .... 1368 Sheridan Avenue, N. Y. C.  
 Greenberg, Joseph ..... 107 Wayne Street,  
 Jersey City, N. J.  
 Meluso, Angelo F. .... 168 Mercer Street,  
 Jersey City, N. J.  
 Meyer, Maurice A. .... 2869 Grand Concourse, N. Y. C.  
 Mihalik, John J. .... 52 East Clifton Avenue,  
 Clifton, N. J.  
 Mihalik, Walter B. .... 52 East Clifton Avenue,  
 Clifton, N. J.  
 Miller, Benj. A. .... 1521 Bryant Avenue, N. Y. C.  
 Mueller, Herman ..... 1244 Brooklyn Avenue,  
 Brooklyn, N. Y.  
 Myllio, Norbert V. .... 2146 58th Street,  
 Brooklyn, N. Y.  
 Nadell, Fred ..... 703 Halsey Street, Brooklyn, N. Y.  
 Nash, Albert E. Jr. .... 36 Central Parkway,  
 Mt. Vernon, N. Y.  
 Neary, William J. .... 680 10th Avenue, N. Y. C.  
 Nelson, Clatus J. .... 9105 89th Avenue, Woodhaven, L. I.  
 Nestor, James ..... 2831 W. 2nd Street, Brooklyn, N. Y.  
 Niechwiadowicz, Joseph S. .... 171 Van Winkle Avenue,  
 Jersey City, N. J.  
 O'Donnell, Richard V. .... 1017 Putnam Avenue,  
 Brooklyn, N. Y.  
 Pagoin, William G. .... 70 Brinkerhoff Street,  
 Jersey City, N. J.  
 Parsekian, Harold ..... 746 Park Avenue,  
 West New York, N. J.  
 Patrone, Eugene F. .... 35 4th Place,  
 Brooklyn, N. Y.

Paulsen, Arthur H. .... 398 6th Street, Brooklyn, N. Y.  
 Perez, Henry T. .... 37 Gard Avenue, Bronxville, N. Y.  
 Solomon, Ira ..... 516 E. 91st Street, Brooklyn, N. Y.  
 Perlman, Joseph ..... 811 E. 178th Street, N. Y. C.  
 Pilug, Werner ..... 526 Park Avenue, Weehawken, N. J.  
 Petrucelly, Vincent Jr. J. .... 2250 McDonald Avenue,  
 Brooklyn, N. Y.  
 Peterson, Bertil A. .... 3169 37th Street, Astoria, N. Y.  
 Pinto, Charles J. .... 2235 First Avenue, N. Y. C.  
 Pearlstein, Joseph ..... 2227 83rd Street, Brooklyn, N. Y.  
 Plotkin, Leopold ..... 972 Home Street, Bronx, N. Y.  
 Patterson, James C. .... 55 Hanson Place,  
 Brooklyn, N. Y.  
 Plotkin, Oscar ..... 965 53rd Street, Brooklyn, N. Y.  
 Pansini, Patrick M. .... 2118 Avenue T, Brooklyn, N. Y.  
 Podbros, Reuben ..... 605 Blake Avenue, Brooklyn, N. Y.  
 Nooger, Lazarus ..... 2810 Olinville Avenue, N. Y. C.  
 Posavetz, John ..... 561 Fox Street, Bronx, N. Y.  
 Laitman, Milton A. .... 76 Heyward Street,  
 Brooklyn, N. Y.  
 Press, George ..... 336 E. 4th Street, N. Y. C.  
 Lefkowitz, Leonard H. .... 1834 55th Street,  
 Brooklyn, N. Y.  
 Puckette, Charles M. .... 80 Crest Road,  
 Ridgewood, N. Y.  
 Grutzner, Harry ..... 337 Prospect Avenue, N. Y. C.  
 Quinn, George P. .... 410 West 57th Street, N. Y. C.

## FIRST YEAR—SECTION 6

Baumgart, Walter A. .... 84 City Boulevard, Staten Island  
 Chason, Jack ..... 125 Brighton Street, Brooklyn, N. Y.  
 Chester, Robert ..... 472 Myrtle Avenue, Coatesville, N. J.  
 Coleman, Charles E. .... 598 Kosciuszko Street,  
 Brooklyn, N. Y.  
 Gorn, Saul ..... 46 W. 83rd Street, N. Y. C.  
 Harris, Frederic H. .... 139 Linden Avenue,  
 Belleville, N. J.  
 Hintze, Henry F. .... 448 Ninth Street, Fairview, N. J.  
 Nilson, Frank ..... 101 2nd Avenue, N. Y. C.  
 Poli, Thomas ..... 56 W. 106th Street, N. Y. C.  
 Rabinowitz, Isadore ..... 2158 Mapes Avenue, Bronx, N. Y.  
 Rabinowitz, Samuel ..... 386 Miller Avenue, Brooklyn, N. Y.  
 Rappon, Emanuel L. .... 95 Sheriff Street, N. Y. C.  
 Rochlin, Nathan ..... 909 E. 178th Street, N. Y. C.  
 Rodriguez, Joseph M. .... 38-30 29th Street,  
 Long Island City, N. Y.  
 Roistacher, Harry A. .... 7005 19th Avenue,  
 Brooklyn, N. Y.  
 Rosenberg, Abraham ..... 6808 21st Avenue,  
 Brooklyn, N. Y.  
 Rosenberg, Eugene A. .... 3415 37th Avenue,  
 Long Island City, N. Y.  
 Rosenwald, William ..... 300 E. 20th Street, N. Y. C.  
 Rotkowitz, John ..... 76 Varet Street, Brooklyn, N. Y.  
 Ruggeri, August ..... 120 E. 2nd Street, N. Y. C.  
 Schiffmacher, George ..... 61-49 Linden Street,  
 Brooklyn, N. Y.  
 Schiffman, Edward ..... 709 E. 5th Street, N. Y. C.  
 Schmits, Henry E. .... 291 Totowa Avenue, Paterson, N. J.  
 Schnall, Jerome ..... 782 E. 175th Street, N. Y. C.  
 Schoen, Herbert D. .... 101 W. 78th Street, N. Y. C.  
 Schumacher, Robert B. .... 109-08 Springfield Boulevard,  
 Queens Village, N. Y.  
 Schwartz, Morris J. .... 1393 St. Johns Place,  
 Brooklyn, N. Y.  
 Schwartz, Murray ..... 869 Stebbins Avenue, Bronx, N. Y.  
 Scott, Alexander G. .... 1025 Hoyt Avenue,  
 Ridgfield, N. J.  
 Scozzari, Salvatore J. .... 64 First Place,  
 Brooklyn, N. Y.  
 Shagaloff, Ben B. .... 1804 Longfellow Avenue,  
 Bronx, N. Y.  
 Sherman, Robert M. .... 43 W. 93rd Street, N. Y. C.  
 Shmulevitz, Bernard ..... 2250 86th Street, Brooklyn, N. Y.  
 Silverman, Emanuel ..... 1156 Liberty Avenue,  
 Brooklyn, N. Y.  
 Simpson, Chas. T. .... 422 Jefferson Avenue,  
 Brooklyn, N. Y.  
 Skorski, Alfons ..... 764 E. 161st Street, Bronx, N. Y.  
 Smith, Alfred R. .... 90 Pinehurst Avenue, N. Y. C.  
 Wexler, August ..... 6015 23rd Avenue, Brooklyn, N. Y.

## FIRST YEAR—SECTION 7

Becker, Harold ..... 58 Church Avenue, Brooklyn, N. Y.  
 Brehm, Harold B. .... 33 Monticello Avenue,  
 Jersey City, N. J.  
 Bucciarelli, Thomas J. .... 239 30th Street,  
 North Bergen, N. J.  
 Cohen, Samuel ..... 201 President Street, Passaic, N. J.  
 Diamond, Isadore ..... 56 Powell Street, Brooklyn, N. Y.  
 Douthit, Reginald ..... 180 W. 135th Street, N. Y. C.



Bruckenthal, Morris...4901 8th Avenue, Brooklyn, N. Y.  
 Burger, Edward H...241 68th Street, Brooklyn, N. Y.  
 Cohen, Celia...316 E. 11th Street, N. Y. C.  
 Cupples, Joseph G...136 16th Street, Brooklyn, N. Y.  
 Ebenstein, Leonard...995 E. 181st Street, Bronx, N. Y.  
 Edelman, Charles S...1393 Lexington Avenue, N. Y. C.  
 Esten, Louis...2100 Westing Street, Brooklyn, N. Y.  
 Gertler, James...1821 Davidson Avenue, N. Y. C.  
 Jensen, Christian I...419 Campton Avenue,  
 Perth Amboy, N. J.  
 Koretzky, Sanford...1831 Marmion Avenue,  
 Bronx, N. Y.  
 Kruatshunok, John...2751 Hone Avenue, Bronx, N. Y.  
 Raboy, Charlotte...808 Dahill Road, Brooklyn, N. Y.  
 Reck, Charles W...1806 Vyse Avenue, Bronx, N. Y.  
 Reich, Sidney...450 Ocean Parkway, Brooklyn, N. Y.  
 Shiskow, Alexander...393 Cator Avenue,  
 Jersey City, N. J.  
 Sigman, Sam...109 Goerck Street, N. Y. C.  
 Weisman, Charles...1250 Grand Concourse, N. Y. C.  
 Wildman, Morris...1936 E. 8th Street, Brooklyn, N. Y.

## THIRD YEAR ELECTRICAL ENGINEERING

Borrett, Bernard R...37 Avon Place,  
 Staten Island, N. Y.  
 Burke, Arthur...504 W. 110th Street, N. Y. C.  
 Del Papa, Frank...2336 64th Street, Brooklyn, N. Y.  
 Ewell, Edward J...299 Fairmount Avenue,  
 Jersey City, N. J.  
 Frank, Bernard H...161 Kosciuszko Street,  
 Brooklyn, N. Y.  
 Green, William F...2108 E. 7th Street, Brooklyn, N. Y.  
 Gross, Jack S...4703 New Utrecht Avenue,  
 Brooklyn, N. Y.  
 Gross, Samuel Ch...326 E. 58th Street, N. Y. C.  
 Hornickel, Herman C...2418 Tratman Avenue,  
 Bronx, N. Y.  
 Kane, Bertram J...416 68th Street, Brooklyn, N. Y.  
 Kane, H. A...16 Norwood Avenue, Glen Rock, N. J.  
 Kettleman, Effingham V. B...64-26 65th Avenue,  
 Maspeth, N. Y.  
 Kniazuk, Michael...614 Franklin Street, Elizabeth, N. J.  
 Koplowitz, Morris...1948 W. 13th Street,  
 Brooklyn, N. Y.  
 Kozlowski, John J...132 Steuben Street,  
 Jersey City, N. J.  
 Langfelder, Richard J...208 Washington Place,  
 Passaic, N. J.  
 Levada, Andrew R...3318 97th Street,  
 Corona, L. I.  
 Lipsky, Ralph...53 Horatio Street, N. Y. C.  
 Luhrs, Charles H...979 Grace Terrace, Teaneck, N. J.  
 Morrissey, John J...961 53rd Street, Brooklyn, N. Y.  
 Nelson, Henry M...1946 Amsterdam Avenue, N. Y. C.  
 Oetting, Arthur F...675 69th Street, Brooklyn, N. Y.  
 Phillips, George M...145 Columbia Avenue,  
 North Bergen, N. J.  
 Rudahl, Arnold E...408 North Street, Fairview, N. J.  
 Salkind, William...339 E. 10th Street, N. Y. C.  
 Strauss, Bernhard...464 Fairview Avenue,  
 Ridgewood, Brooklyn, N. Y.  
 Troeger, Henry...1201 Washington Street,  
 Hoboken, N. J.  
 Van Rensselaer, Schuyler K...36-40 Bowne Street,  
 Flushing, L. I.  
 Vreeland, William G...1645 W. 11th Street,  
 Brooklyn, N. Y.  
 Weipert, John J...469 E. 147th Street, Bronx, N. Y.

## THIRD YEAR—CHEMICAL ENGINEERING

Adams, J. C...223 W. 14th Street, N. Y. C.  
 Bateman, John F...320 Fairmount Avenue,  
 Jersey City, N. J.  
 Broad, Walter C...94 E. 44th Street, Bayonne, N. J.  
 Dolgow, Morris...236 E. 5th Street, N. Y. C.  
 Franz, Henry W...139-04 90th Avenue, Jamaica, L. I.  
 Garher, Frank R...350 Weirfield Street,  
 Brooklyn, N. Y.  
 Gigante, Mario...5 E. 101st Street, N. Y. C.  
 Greenberg, Abe...21 E. 40th Street, Bayonne, N. J.  
 Greenfeld, Charles...5102 11th Avenue, Brooklyn, N. Y.  
 Gumbrecht, John O...162-18 78th Avenue,  
 Flushing, L. I.  
 Heiser, Walter T...170-05 118th Rd., Jamaica, L. I.  
 Jahlrind, Robert J...772 9th Avenue, N. Y. C.  
 Katz, Ruth Diane...265 E. 165th Street, Bronx, N. Y.  
 Kaufman, Wilbur L...71 Vermilyea Avenue, N. Y. C.  
 Kuzmick, Jerome...13 Holden Street, Clifton, N. J.  
 Lieber, Joseph A...80-49 88th Road, Woodhaven, N. Y.  
 Mitchell, Herbert I...750 Hewitt Place, Bronx, N. Y.  
 Morgan, Ivor N...1075 Dewey Place, Elizabeth, N. J.

Muhlsteff, Frederick G...100 W. 105th Street, N. Y. C.  
 Owendoff, Robert A...474 72nd Street,  
 Brooklyn, N. Y.  
 Plaut, Isidore I...1700 Bryant Avenue, Bronx, N. Y.  
 Roistacher, Lester...7005 19th Avenue, Brooklyn, N. Y.  
 Schmutzler, Alfred F...153-25 41st Avenue,  
 Flushing, L. I.  
 Sternberg, Isidore M...1004 Union Street,  
 Brooklyn, N. Y.  
 Swisher, Jerome V...745 Knickerbocker Avenue,  
 Brooklyn, N. Y.  
 Tobey, Louis A...1444 Carroll Street, Brooklyn, N. Y.  
 Turner, Edward H...344 Midwood Street,  
 Brooklyn, N. Y.  
 Wilhelmy, Fred W...117 34th Street, Union City, N. J.  
 Wizemann, Leslie...1210 Olmstead Avenue, N. Y. C.  
 Zwecher, Abraham...1058 Simpson Street, N. Y. C.

## FIVE YEAR COURSE FOURTH YEAR—MECH. ENGINEERING

Begelman, Charles S...250 Prospect Avenue,  
 Brooklyn, N. Y.  
 Botta, Angelo...411 W. 44th Street, N. Y. C.  
 DeMaio, Joseph J...14 Arion Place, Brooklyn, N. Y.  
 Fink, Milton...1224 Walton Avenue, N. Y. C.  
 Gangi, Salvatore R...412 Pulaski Street,  
 Brooklyn, N. Y.  
 Gudel, Julian F...574 73rd Street, Brooklyn, N. Y.  
 Gunkel, Robert E...1222 Rogers Avenue,  
 Brooklyn, N. Y.  
 Horesta, Stephen G...54 Burgess Place, Passaic, N. J.  
 Kivo, Seymour...3451 Giles Place, Bronx, N. Y.  
 Kligfield, George...3765 18th Avenue, Brooklyn, N. Y.  
 Korn, Norman L...529 Forest Avenue,  
 West New Brighton, S. I.  
 Lindheimer, Werner...1230 Brook Avenue, N. Y. C.  
 Luckner, Leo B...8713 Lewis Avenue, Elmhurst, N. Y.  
 Martinez, Joseph...875 Irvine Street, N. Y. C.  
 Roberts, John A...209 W. 104th Street, N. Y. C.  
 Rosen, James J...11 E. 7th Street, N. Y. C.  
 Schaaf, George C...71-29 65th Place, Glendale, N. Y.  
 Scharf, Herbert...605 Rockaway Avenue,  
 Brooklyn, N. Y.  
 Silverman, Sol H...465 E. 93rd Street, Brooklyn, N. Y.  
 Sverdlik, Israel...144-32 Liberty Avenue, Jamaica, L. I.  
 Tucker, Harold...1732 E. 3rd Street, Brooklyn, N. Y.  
 Urick, Nathan...894 E. 163rd Street, Bronx, N. Y.  
 Wildman, Philip...1936 E. 8th Street, Brooklyn, N. Y.  
 Yesowitz, Max...581 Linwood Street, Brooklyn, N. Y.

## FOURTH YEAR—CIVIL ENGINEERING

Ashby, Fern G...201 W. 111th Street, N. Y. C.  
 Blankenstein, Arthur...2323 Walton Avenue, N. Y. C.  
 Blass, Edward J...721 56th Street, Brooklyn, N. Y.  
 Blau, Louis...35-10 35th Street, Astoria, L. I.  
 Bollman, Leslie W...22-58 58th Street,  
 Long Island City, L. I.  
 Brushansky, Abe...81 Blake Avenue, Brooklyn, N. Y.  
 Caspersen, Sten A...535 Dean Street, Brooklyn, N. Y.  
 Cassell, John...159 Gelston Avenue, Brooklyn, N. Y.  
 Cohen, Hyman I...1018 Hoe Avenue, Bronx, N. Y.  
 Cohen, Samuel J...1778 E. 15th Street, Brooklyn, N. Y.  
 Coonan, Lawrence B...3879 Flatlands Avenue,  
 Brooklyn, N. Y.  
 Duffy, Charles...67 69th Street, Brooklyn, N. Y.  
 Eichenbaum, Leopold...531 Greene Avenue,  
 Brooklyn, N. Y.  
 Eitelberg, Sidney...104 Heyward Street,  
 Brooklyn, N. Y.  
 Famoso, Joseph...514 58th Street, Brooklyn, N. Y.  
 Flynn, John T...523 W. 112th Street, N. Y. C.  
 Gibbons, William J...2020 Brown Street,  
 Brooklyn, N. Y.  
 Ginesin, Samuel...178 Amboy Street, Brooklyn, N. Y.  
 Happ, Emmet...87-18 162nd Street, Jamaica, L. I.  
 Harris, Leon L...360 St. Anns Avenue, N. Y. C.  
 Herdman, Albert...470 W. 166th Street, N. Y. C.  
 Hornby, Lewis A...31 Belmont Avenue,  
 Jersey City, N. J.  
 Jahoda, Frank W...21-49 41st Street, Astoria, L. I.  
 Kahlenberg, Arthur...7017 19th Avenue, Brooklyn, N. Y.  
 Kelly, Peter J...37-57 Warren Street,  
 Jackson Heights, N. Y.  
 Krueger, Paul C., Jr...2107 Tomlinson Avenue,  
 New York City  
 Landin, Arthur D...1675 University Avenue, N. Y. C.  
 Lewis, Irving...21 E. 110th Street, N. Y. C.  
 Linsky, David J...1135 54th Street, Brooklyn, N. Y.  
 Luna, William A...2537 Grand Concourse, N. Y. C.  
 Malter, Charles...55 Avenue C, N. Y. C.  
 Mc Nerney, John J...539 W. 150th Street, N. Y. C.



# THE \* C A B L E \* O F \* 1 9 3 5

Mendizza, Germano R. 409 69th Street,  
Brooklyn, N. Y.  
Milbert, Hyman 1270 Grand Avenue, N. Y. C.  
Muzelak, Michael 242 E. 89th Street, N. Y. C.  
Nesti, Anthony J. 167 W. 83rd Street, N. Y. C.  
Passel, Leon 1536 Seabury Place, N. Y. C.  
Pellegrini, William U. 5 King Street, N. Y. C.  
Rivetz, Martin 539 Christopher Avenue,  
Brooklyn, N. Y.  
Ruchman, Joseph 787 Prospect Avenue,  
Bronx, N. Y.  
Schmidt, Frank J. 426 Menahan Street,  
Ridgewood, N. Y.  
Segalman, Alexander L. 298 Tompkins Avenue,  
Brooklyn, N. Y.  
Siegel, Leonard 95 Grant Avenue, Jersey City, N. J.  
Stafford, Frank 956 E. 172nd Street, N. Y. C.  
Stern, Adolph B. 2880 E. 6th Street, Brooklyn, N. Y.  
Sundermeyer, J. Karel 123 N. 13th Street,  
Prospect Park, Paterson, N. J.  
Taras, Paul 648 Tinton Avenue, N. Y. C.  
Tracey, Frank A. 16 State Normal Place,  
Jersey City, N. J.  
Vinci, Carmelo A. 199 Hoyt Street, Brooklyn, N. Y.  
Westman, John F. 144 Waverly Place, N. Y. C.  
Wilson, Edmund B. 181 Vermilyea Avenue, N. Y. C.

## FOURTH YEAR—ELECTRICAL ENGINEERING

Adler, Herbert 1265 E. 8th Street, Brooklyn, N. Y.  
Aruck, Michael 937 E. 181st Street, N. Y. C.  
Bauman, H. 2061 59th Street, Brooklyn, N. Y.  
Berg, Stanley E. 9413 74th Street, Woodhaven, N. Y.  
Burke, James J. 649 Dahill Road, Brooklyn, N. Y.  
Callen, Adam 200 E. 33rd Street, N. Y. C.  
Cataldo, Victor M. 943 Longwood Avenue, N. Y. C.  
Coleman, Irwin M. 581 Academy Street, N. Y. C.  
Cuttica, Hercules 408 W. 46th Street, N. Y. C.  
Dlugatch, Irwin 678 Willoughby Avenue,  
Brooklyn, N. Y.  
Duguid, Raymond B. 167 Linden Boulevard,  
Brooklyn, N. Y.  
Gademann, Oscar M. 520 Evergreen Avenue,  
Brooklyn, N. Y.  
Garrison, Vernon L. 155 Hagaman Place,  
Port Richmond, N. Y.  
Gill, James J. 47-22 45th Street, Woodside, N. Y.  
Goldberg, Milton 618 Franklin Street,  
Elizabeth, N. J.  
Gorman, Charles Ed. 153-24 Sanford Avenue,  
Flushing, L. I.  
Gravdal, Nils 31-34 30th Street, Astoria, L. I.  
Kilmer, Raymond K. 103-21 169 Street, Jamaica, L. I.  
Kovacevics, George M. 96 Derby Street,  
Valley Stream, N. Y.  
Kugler, Leo 451 Palisade Avenue, W. N. Y., N. J.  
Landsverk, Arthur J. 165 15th Street, W. N. Y., N. J.  
Lukanitsch, Leonard R. 7-9 E. 109th Street, N. Y. C.  
Mager, Irving A. 30 Perry Street, N. Y. C.  
Matson, David L., Jr. 50 Turner Place,  
Brooklyn, N. Y.  
Munn, Alfred J. 151 Jay Avenue, Lyndhurst, N. J.  
Normann, Joseph A. 1142 Hancock Street,  
Brooklyn, N. Y.  
Oakwood, Elliott F. 923 New York Avenue,  
Brooklyn, N. Y.  
Orellana, Ildefonso G. 88-17 50th Avenue,  
Elmhurst, L. I.  
Osterholz, Diedrich 60-15 Woodbine Street,  
Ridgewood, N. Y.  
Perlman, Irving 1004 Union Street, Brooklyn, N. Y.  
Quick, William S. 543 Shackamaxon Drive,  
Westfield, N. J.  
Rich, Abraham J. 49 Thatford Avenue,  
Brooklyn, N. Y.  
Scanlon, Robert P. 282 Reservoir Place, Bronx, N. Y.  
Schmelzer, William 34-23 41st Street, Astoria, L. I.  
Schumacher, Henry 360 46th Street, Brooklyn, N. Y.  
Shafiroff, Harry 2871 W. 30th Street, Brooklyn, N. Y.  
Smith, Edwin V. 1153 Grand Concourse, N. Y. C.  
Thorsen, T. Edward 5418 8th Avenue, Brooklyn, N. Y.  
Velleman, Jack E. 372 St. Johns Place,  
Brooklyn, N. Y.  
Visco, Pasquale 303 6th Avenue, N. Y. C.  
Warren, Clifford A. 967 W. 4th Street,  
Plainfield, N. J.  
Way, Milton T. 7901 Fourth Avenue, Brooklyn, N. Y.  
Wegele, Rudolph V. 201 E. 95th Street, N. Y. C.  
Westerstrom, Charles A. 968 Gillies Avenue,  
North Bergen, N. J.  
White, Edward G. 120-36 195th Street,  
St. Albans, L. I.

Wiesendanger, Everett J. 200 E. 16th Street, N. Y. C.  
Zenoni, Walter E. 2750 Paulding Avenue, N. Y. C.

## FOURTH YEAR—CHEMICAL ENGINEERING

Aronson, David 1416 48th Street, Brooklyn, N. Y.  
Benda, George 454 Seneca Avenue,  
Ridgewood, L. I.  
Bergman, Ralph Joel 755 Southern Boulevard,  
Bronx, N. Y.  
Boothby, Otis L. 357 9th Street, Brooklyn, N. Y.  
Boross, Stephen 899 E. 169th Street, N. Y. C.  
Cooper, Morris 670 E. 176th Street, N. Y. C.  
Czarnecki, John D. 101 Clifton Place,  
Jersey City, N. J.  
Drimer, David 1131 Elder Avenue, Bronx, N. Y.  
Edman, Walter W. 813 71st Street, Brooklyn, N. Y.  
Emigholz, Frederick 185 Conover Street,  
Brooklyn, N. Y.  
Hill, Joseph A. 1690 Union Street, Brooklyn, N. Y.  
Hunger, Meyer M. 118 Herzl Street, Brooklyn, N. Y.  
Kelly, Eugene A. 14 Miller Place, Hempstead, N. Y.  
Klotzky, Benjamin 871 E. 170th Street, Bronx, N. Y.  
Levine, Benjamin 1105 Elder Avenue, N. Y. C.  
Lindner, John A. 1708 Woodbine Street,  
Brooklyn, N. Y.  
Schneider, Abraham 1454 St. Johns Place,  
Brooklyn, N. Y.  
Schramm, Louis J. 117-09 130th Avenue,  
Richmond Hill, N. Y.  
Tomashkevsky, Harry 380 E. 8th Street, N. Y. C.  
Wald, Nathan 748 Trinity Avenue, N. Y. C.

## FIFTH YEAR—MECHANICAL ENGINEERING

Arata, Charles Anthony 213 6th Avenue, N. Y. C.  
Cohen, Sol 607 Georgia Avenue, Brooklyn, N. Y.  
Crosby, John 25 E. 177th Street, N. Y. C.  
Di Prima, Anthony 544 Hart Street, Brooklyn, N. Y.  
Edelstein, Abraham 1129 Morris Avenue, N. Y. C.  
Ehrlich, William 287 Division Avenue, Brooklyn, N. Y.  
Fexas, Michael E. 18 Lawrence Avenue,  
Brooklyn, N. Y.  
Foltan, Louis 686 Dawson Street, Bronx, N. Y.  
Gerling, Ernest A. 715 58th Street, Brooklyn, N. Y.  
Horbund, Isadore 606 Banner Avenue, Brooklyn, N. Y.  
Kroll, Leonard Arthur 944 East 13th Street,  
Brooklyn, N. Y.  
Melick, Thomas E. Belle Mead, N. J.  
Nagoshiner, George 1685 Bryant Avenue,  
Bronx, N. Y.  
Nelson, Arthur Joseph 132 Lexington Avenue,  
Port Richmond, S. I.  
Schmidt, Fred William 257 Linden Street,  
Brooklyn, N. Y.  
Stephenson, Frederick Box 203, King's Park,  
L. I., N. Y.

## FIFTH YEAR—CIVIL ENGINEERING

Adams, Horton K. 265 E. 201st Street, Bronx, N. Y.  
Bernstein, Sam 1265 Brook Avenue, N. Y. C.  
Birgy, Jacob 585 Tenth Avenue, N. Y. C. 444 W 43 St NYC  
Blum, Albert E. 43 Logan Street, Brooklyn, N. Y.  
Curtis, Frank, Jr. 253 Ridgewood Avenue,  
Brooklyn, N. Y.  
Driscoll, Timothy J. 217 Benziger Avenue,  
New Brighton, N. Y.  
Duncan, James L. 41-14 Hampton Street, 4245 Judge St Elmhurst  
Elmhurst, L. I.  
Farkas, Harry 3409 14th Avenue, Brooklyn, N. Y.  
Frisch, Solomon 47-11 12th Avenue, Brooklyn, N. Y. 6916-183 St Flushing  
Geyer, Paul 218 W. 16th Street, N. Y. C.  
Hally, Edward F. 1545 73rd Street, Brooklyn, N. Y.  
Hannon, John B. 654 74th Street, Brooklyn, N. Y.  
Knipper, Francis E. 550 Bainbridge Street,  
Brooklyn, N. Y.  
Kochman, Emil J. 438 E. 70th Street, N. Y. C. 720 St Mary St NYC  
Koehl, Joel  
Leon, Robert K. 525 Eastern Parkway, Brooklyn, N. Y.  
Leverock, Sidney C. 101-45 114th Street,  
Richmond Hill  
Levine, Jack G. 243 Henry Street, N. Y. C.  
Mayer, John B. 311 W. 112th Street, N. Y. C.  
Mazzucca, Joseph A. 398 E. 152nd Street, N. Y. C.  
Milner, James H., Jr. 21-47 37th Street, 109-85 203 St  
Long Island City, L. I. St Albans L I  
Pettersen, Eugene A. 10 Beech Street,  
Cranford, N. J.  
Reuss, William P. 130 Highpoint Avenue,  
Weehawken, N. J.  
Ringel, Philip 565 Elton Street, Brooklyn, N. Y.



# T H E \* C A B L E \* O F \* 1 9 3 5

Roulett, John P., Jr. 23 Davis Street,  
Long Island City, L. I.  
Saraniero, Emil J. 31 St. Marks Avenue,  
Brooklyn, N. Y.  
Stolle, Arthur D. 119 So. Broadway,  
White Plains, N. Y.  
Tarnowsky, Emil 20 Yonkers Avenue, Yonkers, N. Y.  
Wexler, Saul 7106 18th Avenue, Brooklyn, N. Y.  
Wolin, Michael 5303 Beverly Road, Brooklyn, N. Y.  
2100 Westbury Ct. Brooklyn

## FIFTH YEAR—ELECTRICAL ENGINEERING

Bergler, Robert J. 1918 La Fontaine Avenue,  
Bronx, N. Y.  
Coffey, James E. 1458 72nd Street, Brooklyn, N. Y.  
Costa, Joseph F. 7811 19th Avenue, Brooklyn, N. Y.  
Duke, Harry 2011 Morris Avenue, N. Y. C.  
Ekstrand, Sture O. 18 Cole Street, Bergenfield, N. J.  
Epstein, Leon 25 E. Clarke Place, Bronx, N. Y.  
Fleischer, Herbert E. 3752 89th Street,  
Jackson Heights, N. Y.  
Folger, Herman A. 9 W. 76th Street, N. Y. C.  
Franke, Herman K. 626 Trinity Avenue, N. Y. C.  
Gartelmann, Louis H. 1350 Stebbins Avenue, N. Y. C.  
Gerin, Leo 55 Greenwich Avenue, N. Y. C.  
Grutzner, Walter E. 397 Prospect Avenue,  
Brooklyn, N. Y.  
Hayes, William S. 244 Pindle Avenue,  
Englewood, N. Y.  
Hennan, Fred A. 475 So. Columbus Avenue,  
Mount Vernon, N. Y.  
Katz, Walter C. 106 Catskill Avenue, Yonkers, N. Y.  
Korlowitz, Sidney M. 3043 Emmons Avenue,  
Brooklyn, N. Y.  
Lampkin, Redvers J. 310 W. 152nd Street, N. Y. C.  
La Rose, William 1783 New York Avenue,  
Brooklyn, N. Y.  
Lindheimer, Emanuel M. 5201 94th Street,  
Elmhurst, N. Y.  
Long, Louis J. 860 W. 181st Street, N. Y. C.  
McGuire, Leo T. 649 Bay Ridge Parkway,  
Brooklyn, N. Y.  
McMahon, John J. 1240 Clay Avenue, N. Y. C.  
Offt, Otto 3130 81st Street, Jackson Heights, N. Y.  
Perlman, Irving M. 1070 Faile Street, N. Y. C.  
Slack, William G. 2837 Roebling Avenue,  
Bronx, N. Y.

Straub, Herman W. New Bridge Road,  
North Hackensack, N. J.  
Waldo, Nat E. 1082 Gerard Avenue, N. Y. C.  
Wilcox, Donald 2444 Walton Avenue, Bronx, N. Y.  
Webb, William B. 2500 Webb Avenue, N. Y. C.

## FIFTH YEAR—CHEMICAL ENGINEERING

Anthony, R. 110 E. 17th Street, N. Y. C.  
Albert, Harold I. 2164 72nd Street, Brooklyn, N. Y.  
Kashman, Morry J. 15 Brighton 10 Path,  
Brooklyn, N. Y.  
Lovas, Joseph J. 1675 Linden Street, Brooklyn, N. Y.  
Mark, Egbert W. 150 Beach Street, Stapleton, S. I.  
Olsen, Karl M. 4206 5th Avenue, Brooklyn, N. Y.  
Brooklyn, N. Y.  
Rasmussen, Marvin H. 693 Franklin Avenue,  
Rosen, Gustav A. 562 83rd Street, Brooklyn, N. Y.  
Schnettler, Frank J. 28 Cook Street, Haledon, N. J.  
Seiff, Harley B. 376 Keap Street, Brooklyn, N. Y.  
Silberman, Adolph A. 106 Bainbridge Street,  
Brooklyn, N. Y.  
Spiegelman, Arthur 45 Stratford Place, Newark, N. J.  
Stokien, Edwin J. 189-29 117th Road,  
St. Albans, N. Y.  
Kugel, Walter Fritz 270 Balleville Pike,  
North Arlington, N. J.  
Weintraub, William 988 Greene Avenue,  
Brooklyn, N. Y.

## POST GRADUATE—CHEMICAL ENGINEERS

Dinkfield, August M. 285 Maryland Avenue,  
Paterson, N. J.  
Donato, John B. 379 Van Brunt Street, Brooklyn, N. Y.  
Gordon, Philip L. 2955 W. 29th Street, Brooklyn, N. Y.  
Hagen, George 9115 Ridge Boulevard,  
Brooklyn, N. Y.  
Heinlein, Emil Stewart Avenue, Garden City, N. Y.  
Landau, Milton 609 W. 137th Street, N. Y. C.  
Mautner, Henry R. 203 E. 27th Street, N. Y. C.  
Moran, Raymond F. 574 Monroe Street,  
Brooklyn, N. Y.  
Ploetz, Arthur O. 3266 35th Street, Astoria, L. I.  
Ratner, George B. 542 W. 112th Street, N. Y. C.  
Roman, Arthur 1580 President Street, Brooklyn, N. Y.  
Scheiner, Morris 342 E. 15th Street, N. Y. C.

# INSTITUTE OF TECHNOLOGY

## FIRST YEAR—SECTION 1

Accinno, Dante J. 839 E. 228th Street, Bronx, N. Y.  
Agin, Julius 846 Fulton Street, Brooklyn, N. Y.  
Arrow, Leon 478 West End Avenue, Brooklyn, N. Y.  
Auerbach, Jack S. 1348 Clinton Avenue,  
Bronx, N. Y.  
Blitz, Leo 636 E. 136 Street, N. Y. C.  
Bodzin, Hyman 204 Bushwick Avenue, Brooklyn, N. Y.  
Borden, Herbert Louis 2531 E. 6th Street,  
Brooklyn, N. Y.  
Boudon, Placer 1256 70th Street, Brooklyn, N. Y.  
Boyne, Frank J. 28 Lexington Street,  
Rockville Centre, N. Y.  
Budden, Edgar L. 10903 86th Avenue,  
Richmond Hill, N. Y.  
Capodici, Alfonso 2442 Prospect Avenue, N. Y. C.  
Dohn, Charles W. 57-03 Catalpa Avenue,  
Brooklyn, N. Y.  
Duch, Stephen 532 Bergen Street, Newark, N. J.  
Dunkelman, Lawrence 142 Graham Avenue,  
Paterson, N. J.  
Egbert, Robert B. 139-28 87th Avenue, Jamaica, L. I.  
Fiala, John J. 1351 1st Avenue, N. Y. C.  
Filene, Milton R. 1762 E. 3rd Street, Brooklyn, N. Y.  
Fink, Raymond H. 326 So. Tenth Street, Newark, N. J.  
Goldman, Samuel 1837 W. 6th Street, Brooklyn, N. Y.  
Goodman, Jerry 41 Lott Avenue, Brooklyn, N. Y.  
Guol, John W. 8048 89th Avenue, Woodhaven, N. Y.  
Hammond, Robert J. 220 Claremont Avenue,  
Jersey City, N. J.  
Hedelund, Donald R. 976 79th Street, Brooklyn, N. Y.  
Herman, Jacob 699 Georgia Avenue, Brooklyn, N. Y.  
Katz, Abraham 645 Vermont Street, Brooklyn, N. Y.  
Kerstein, Joseph D. 1556 38th Street, Brooklyn, N. Y.  
Loiacono, James M. 31 Paterson Street,  
Kearny, N. J.

## FIRST YEAR—SECTION 2

Blan, Leslie L. 563 Cauldwell Avenue, N. Y. C.  
Center, Bernard H. 148 Newport Street,  
Brooklyn, N. Y.  
Fleit, Matthew 2162 69th Street, Brooklyn, N. Y.  
Higgs, Alfred H. 41 15th Avenue,  
East Paterson, N. J.  
Hoffman, Edward E. 218 Etna Street, Brooklyn, N. J.  
Hullmann, Walter P. 141 Beechwood Avenue,  
Mount Vernon, N. Y.  
Hury, Peter 357 W. 37th Street, N. Y. C.  
Iannelli, Egidio A. 86 Webster Avenue,  
Harrison, N. J.  
Iskowitz, Norman 1477 Bedford Avenue,  
Brooklyn, N. Y.  
Jehle, Edward J. 31-28 Crescent Street,  
Glendale, L. I.  
Kandlner, Harold J. 239 E. Kingsbridge Road,  
Bronx, N. Y.  
Kiehn, Otto G. 11120 103rd Avenue,  
Richmond Hill, N. Y.  
Klimas, Charles O. 104-61 Lefferts Boulevard,  
Richmond Hill, N. Y.  
Knopfle, William H. 69-12 Forest Avenue,  
Ridgewood, N. Y.  
Koosman, Joseph G. 71 Trimble Avenue,  
Clifton, N. J.  
Kordak, John A. 503 Allen Street, Linden, N. J.  
Kramer, Jack 28 Porter Avenue, Brooklyn, N. Y.  
Landaw, George 583 Broadway, Paterson, N. J.  
Landsman, Jacob 117 E. 109th Street, N. Y. C.  
Lang, Sheldon L. 2149 E. 21st Street, Brooklyn, N. Y.  
Lenter, Herbert I. 109 Palisade Avenue,  
Yonkers, N. Y.  
Leventhal, Abraham 2173 E. 5th Street,  
Brooklyn, N. Y.



# THE \* C A B L E \* O F \* 1 9 3 5

Levigton, Daniel.....766 Fairmount Place, N. Y. C.  
 Lifschitz, Milton.....2402 85th Street, Brooklyn, N. Y.  
 Loughlin, Bernard D.....127 Highland Avenue,  
 Jersey City, N. J.  
 Matiuk, Alexander.....664 Hopkinson Avenue,  
 Brooklyn, N. Y.  
 Matzick, Arthur.....1123 4th Avenue, North Bergen, N. J.  
 McLaren, Bernard F.....229 Main Street,  
 Tuckahoe, N. Y.  
 Menkes, Arnold M.....324 Montgomery Street,  
 Brooklyn, N. Y.  
 Van Name, Kenneth E.....81 Douglas Road,  
 Staten Island, N. Y.

## FIRST YEAR—SECTION 3

Flynn, William C.....466 45th Street, Brooklyn, N. Y.  
 Kenny, Charles Robert.....3828 Bedford Avenue,  
 Brooklyn, N. Y.  
 Kwatt, Israel.....3306 Surf Avenue, Brooklyn, N. Y.  
 Lester, Seymour.....712 Crown Street, Brooklyn, N. Y.  
 Michaels, S. E.....323 Grand Street, Brooklyn, N. Y.  
 Miller, Charles B.....1817 Bleecker Street,  
 Ridgewood, N. Y.  
 Moeller, William P.....201 Webster Avenue,  
 Brooklyn, N. Y.  
 Moore, William S.....15 July Walk, Long Beach, N. Y.  
 Nadeau, Robert F.....354 E. 66th Street, N. Y. C.  
 Oberg, Harry D.....13 Smith Street, E. Rockaway, N. Y.  
 Oszvath, Daniel R.....169 Greenridge Avenue,  
 White Plains, N. Y.  
 Pfann, William G.....75-48 Juniper Valley Road,  
 Middle Village, Long Island  
 Plotkin, Isidore.....2711 Avenue U., Brooklyn, N. Y.  
 Purr, Michael M.....2993 Zulette Avenue, N. Y. C.  
 Rankel, Robert A.....302 Linden Street,  
 Ridgewood, N. Y.  
 Razim, William W.....222 Ogden Avenue,  
 Jersey City, N. J.  
 Rennolds, Philip J.....3805 Lyme Avenue,  
 Brooklyn, N. Y.  
 Richmond, Nathan.....79 Sherman Street, Passaic, N. J.  
 Rockenbach, Walter L.....211 Beach 99th Street,  
 Rockaway Beach, N. Y.  
 Ryan, R. Kenneth.....304 Stegman Parkway,  
 Jersey City, N. J.  
 Sagonas, Peter.....1057 Simpson Street, N. Y. C.  
 Samberg, Charles.....731 Hegeman Avenue,  
 Brooklyn, N. Y.  
 Sanders, Milton A.....140 Union Avenue,  
 Sandler, Morton.....2025 59th Street, Brooklyn, N. Y.  
 Irvington, N. J.  
 Schreiberr, Stanton.....70-15 67th Street, Glendale, L. I.

## FIRST YEAR—SECTION 4

Berkman, Joseph.....Nye Avenue, 30, Newark, N. J.  
 Hahn, Fred E.....82-39 51st Avenue, Elmhurst, N. Y.  
 Hessing, Harold.....2134 Vyse Avenue, Bronx, N. Y.  
 Pickett, James G.....3 Dayton Street, Elizabeth, N. J.  
 Seifried, Paul E.....Main Street, New City, N. Y.  
 Shenker, Henry.....837 47th Street, Brooklyn, N. Y.  
 Siesholtz, Herbert W.....142 Goldsmith Avenue,  
 Newark, N. J.  
 Slotkin, Meyer.....642 Fox Street, Bronx, N. Y.  
 Slotnick, Irving.....283 Barrow Street, Jersey City, N. J.  
 Stadnitski, Robert K.....130 W. 166th Street,  
 Bronx, N. Y.  
 Stegmuller, August G.....228 Beach 79th Street,  
 Rockaway Beach, N. Y.  
 Strauss, Leo.....681 Greene Avenue, Brooklyn, N. Y.  
 Strauss, Max W.....5703 New Utrecht Avenue,  
 Brooklyn, N. Y.  
 Tanenbaum, Solomon.....473 Flatbush Avenue,  
 Brooklyn, N. Y.  
 Thieberger, Alfred H.....2244 Morris Avenue,  
 Bronx, N. Y.  
 Thomas, Murray.....2103 Vyse Avenue, Bronx, N. Y.  
 Tucker, Walter D.....245 Putnam Avenue,  
 Udell, David S.....759 46th Street, Brooklyn, N. Y.  
 Brooklyn, N. Y.  
 Walsh, Edward G.....66-13 73rd Place,  
 Middle Village, N. Y.  
 Weber, Paul J.....2027 Ralph Street, Ridgewood, N. Y.  
 Weintraub, Murray.....5502 14th Avenue, Brooklyn, N. Y.  
 Weixel, John J.....202 High Avenue, Nyack, N. Y.  
 White, Louis.....152 W. 21st Street, N. Y. C.  
 Yeaman, Joseph I.....40 W. 19th Street, Bayonne, N. J.  
 Zernow, Louis.....619 Linwood Street, Brooklyn, N. Y.  
 Ziegler, J. Carl.....98 Greenwich Avenue,  
 Roosevelt, L. I.

## SECOND YEAR—MECH. ENGINEERING

DeMassi, Rocco.....189 Harbor Road,  
 M. H., Staten Island, N. Y.  
 Dmitroff, George A.....30 E. 128th Street, Apt. 15,  
 New York City  
 Kirby, Cornelius C.....137-28 97th Avenue,  
 Jamaica, N. Y.  
 Kutzelman, Elmer.....1531 Westchester Avenue, N. Y. C.  
 Landum, Archie H.....821 E. 166th Street, Bronx, N. Y.  
 Martin, Raymond E.....28 Fort Charles Place, N. Y. C.  
 Mitchell, William L.....88 Fort Greene Place,  
 Brooklyn, N. Y.  
 Robinson, Dale C.....419 E. 5th Street, N. Y. C.  
 Shalita, Martin.....577 Midwood Street, Brooklyn, N. Y.  
 Vignini, Walter.....30 Bay 13th Street, Brooklyn, N. Y.  
 Wild, Oldrich.....401 E. 77th Street, N. Y. C.  
 Winton, Hugh.....76 S. Village Avenue,  
 Rockville Center, N. Y.

## SECOND YEAR—CIVIL ENGINEERING

Adams, Frederick C.....1233 Broadway, Brooklyn, N. Y.  
 Anders, Roland U.....133-48 117th Street,  
 Ozone Park, L. I.  
 Dresher, Harold L.....372 Elton Street, Brooklyn, N. Y.  
 Friedberg, Isaiah.....1665 Weeks Avenue, Bronx, N. Y.  
 Goldstein, Isadore L.....935 Kelly Street, Bronx, N. Y.  
 Grady, Allen B.....5742 Elmhurst Avenue,  
 Long Island City, N. Y.  
 Green, Giles G.....144-22 87th Avenue, Jamaica, L. I.  
 Kachura, John.....127-03 115th Avenue,  
 So. Ozone Park, L. I.  
 Kelemen, Frank K.....15 E. 109th Street, N. Y. C.  
 King, John J.....9 St. Francis Place, Brooklyn, N. Y.  
 LeFaber, Francis F.....571 W. 139th Street, N. Y. C.  
 Levinson, Murray.....192 Bay 32nd Street,  
 Brooklyn, N. Y.  
 McGowan, John Oldfield.....51 Hillcrest Avenue,  
 New Rochelle, N. Y.  
 Mazurkiewicz, Jack I.....262 Hewes Street,  
 Brooklyn, N. Y.  
 Okun, Daniel A.....3863 Bedford Avenue,  
 Brooklyn, N. Y.  
 Rosen, Isidore Sam.....1492 St. Marks Avenue,  
 Brooklyn, N. Y.  
 Rosovsky, Simon.....2303 E. 21st Street, Brooklyn, N. Y.

## SECOND YEAR—ELECTRICAL ENGINEERING

Ast, Paul F.....446 E. 85th Street, N. Y. C.  
 Clair, Seymour.....1035 53rd Street, Brooklyn, N. Y.  
 Constantinos, Constantine.....209 Dyckman Street,  
 New York City  
 Cozine, Harold E.....369 3rd Street, Brooklyn, N. Y.  
 Danko, Stanislaus F.....214 E. 10th Street, N. Y. C.  
 Daubaras, Edward J.....134 Himrod Street,  
 Brooklyn, N. Y.  
 Feingold, William.....7719 101st Avenue,  
 Ozone Park, N. Y.  
 Gaillard, Hamilton F.....Kings Highway,  
 Valley Cottage, N. Y.  
 Haas, John.....138-54 102nd Avenue, Jamaica, N. Y.  
 Holdsworth, Woodrow.....2210 Harmon Street,  
 Brooklyn, N. Y.  
 Ipsen, Sigurd J.....749 Richmond Road,  
 Richmond, Staten Island, N. Y.  
 Jaffe, Elias.....2164 Prospect Avenue, Bronx, N. Y.  
 Kogan, William.....587 Osborne Street, Brooklyn, N. Y.  
 Margolis, Irving.....1488 Vyse Avenue, Bronx, N. Y.  
 McShea, William T.....3321 89th Street,  
 Jackson Heights, L. I.  
 Merlin, Abr. G.....1445 St. Johns Place, Brooklyn, N. Y.  
 Muzzinan, Everett Gustave.....10 Grove Street,  
 Elizabeth, N. J.  
 Peirano, John J.....1684 W. 10th Street, Brooklyn, N. Y.  
 Pierce, George C.....102 Rogers Avenue,  
 Brooklyn, N. Y.  
 Schaefer, Joseph B.....148-24 86th Avenue,  
 Jamaica, L. I.  
 Schumann, Leo I.....1465 Townsend Avenue,  
 Bronx, N. Y.  
 Schneyer, Elias.....201 South 2nd Street, Brooklyn, N. Y.  
 Terry, George C.....143-56 Sanford Avenue,  
 Flushing, L. I.  
 Washileski, Edward.....248 Pennsylvania Avenue,  
 Brooklyn, N. Y.  
 White, Al. P.....54 Waverly Street, New Haven, Conn.



# T H E \* C A B L E \* O F \* 1 9 3 5

## SECOND YEAR—CHEMICAL ENGINEERING

Anderson, Ernest V. 44 Columbia Avenue, Rockville Center, N. Y.  
 Bass, Walter L. 1136 Colgate Avenue, Bronx, N. Y.  
 Baum, Samuel 3332 Wilson Avenue, Bronx, N. Y.  
 Berman, Saul 70 E. 43rd Street, Brooklyn, N. Y.  
 Blumenfeld, Alexander S. 49 W. 91st Street, N. Y. C.  
 Brown, Gregory F. 74 Renshaw Avenue, East Orange, N. J.  
 Buy, Walter T. 610 Brookside Place, Plainfield, N. J.  
 Chen, Alwin B. 605 W. 139th Street, N. Y. C.  
 Deed, Donald, William 268 Cedar Hill Avenue, Nyack, N. Y.  
 DePierre, Vincent 950 41st Street, Brooklyn, N. Y.  
 DeRitter, Elmer 123 North Third Street, Paterson, N. J.  
 Dorfman, Harold A. 164 2nd Street, Mineola, N. Y.  
 Gershon, Esther R. 758 Kelly Street, N. Y. C.  
 Hashmall, Frank 1141 E. 165th Street, N. Y. C.  
 Kolesnikoff, Peter B. 98-15 Corona Avenue, Corona, N. Y.  
 Krasnoff, Albert 319 Peshine Avenue, Newark, N. J.  
 Klien, David J. 40 Featherbed Lane, N. Y. C.  
 Mitchell, Paul R. 2439 Morris Avenue, Bronx, N. Y.  
 Pietila, Lawrence 924 Hampton Street, Linden, N. J.  
 Prati, Charles H. 236 Melbourne Avenue, Mamaroneck, N. Y.  
 Reel, Israel 811 E. 178th Street, N. Y. C.  
 Roberts, David K. 160 E. 48th Street, N. Y. C.  
 Rosenberg, Charles 2700 Bronx Park East, N. Y. C.  
 Russo, Albert V. 2025 E. 9th Street, Brooklyn, N. Y.  
 Schallis, Alvin H. 630 Bergen Avenue, Jersey City, N. J.  
 Scheibel, Edward G. 7158 68th Place, Glendale, N. Y.  
 Solinsky, Charles 741 Howard Avenue, Brooklyn, N. Y.  
 Steinman, Joseph 1784 Prospect Avenue, N. Y. C.  
 Swenson, Leonard K. 313 E. 69th Street, N. Y. C.  
 Szenes, Emery 2000 Prospect Avenue, Bronx, N. Y.  
 Taylor, Glenn H. 219 Rankin Street, Elizabeth, N. J.  
 Thoman, Louis H. 111 82nd Street, Brooklyn, N. Y.  
 Umpdenstock, Robert J. 39-35 65th Place, Woodside, N. Y.  
 Varnum, Gerald F. 1270 78th Street, Brooklyn, N. Y.  
 Wiswall, Joseph M. Old Dock Road, Closter, N. J.  
 Wythe, Frederick J. 12 Pershing Crescent, Jamaica, L. I.  
 Zelman, Fred 275 Dumont Avenue, Brooklyn, N. Y.

## THIRD YEAR—MECHANICAL ENGINEERING

Barry, Andrew F. 117 Bradford Avenue, Rye, N. Y.  
 Berlin, Abraham 605 51st Street, Brooklyn, N. Y.  
 Capo, Joseph J. 213 E. 34 Street, N. Y. C.  
 Fischer, Edward G. 116 W. 176th Street, Bronx, N. Y.  
 Fox, Sanford 2120 71st Street, Brooklyn, N. Y.  
 Gould, Eliot N. 746 Kelly Street, Bronx, N. Y.  
 Kleban, Bernard 302 Pulaski Street, Brooklyn, N. Y.  
 Korn, Fred 588 Concord Avenue, Bronx, N. Y.  
 Last, Bernard 589 Tinton Avenue, N. Y. C.  
 Lipschitz, Maurice 726 W. Side Avenue, Jersey City, N. J.  
 Mikulka, Charles 598 St. Mary's Street, N. Y. C.  
 Moore, Vincent T. 88 Park Avenue, Port Washington, N. Y.  
 Murphy, Carroll T. G. 141 Livingston Avenue, Yonkers, N. Y.  
 Stillman, Isadore 81 Pulaski Street, Brooklyn, N. Y.  
 Swertloff, Sidney 484 E. 35th Street, Brooklyn, N. Y.  
 Tedesco, John T. 1404 Prospect Avenue, N. Y. C.  
 Wales, Henry M. 19 Sylvan Place, New Rochelle, N. Y.  
 Webster, Lyle B. 90-07 171st Street, Jamaica, N. Y.

## THIRD YEAR—CIVIL ENGINEERING

Baptista, Frederick W. 510 W. 162nd Street, N. Y. C.  
 Bihler, David W. B. 3738 Olinville Avenue, N. Y. C.  
 Black, Irving 1973 Douglass Street, Brooklyn, N. Y.  
 Fletcher, Robert J. 43-51 166th Street, Flushing, L. I.  
 Glass, Sherman 264 Ryerson Street, Brooklyn, N. Y.  
 Heine, Harvey W. 1193 Fulton Avenue, N. Y. C.  
 Lieber, Henry G. 8049 88th Road, Woodhaven, L. I.  
 Lipschitz, David 4612 12th Avenue, Brooklyn, N. Y.  
 Marrone, Adolph A. 133 North 5th Avenue, Mount Vernon, N. Y.  
 Patt, Abraham 315 Hopkinson Avenue, Brooklyn, N. Y.  
 Ruzika, Joseph W. 624 4th Street, Lyndhurst, N. J.  
 Weinstein, Herman H. 7813 68th Avenue, Middle Village, N. Y.  
 Yokota, George J. 301 W. 112th Street, N. Y. C.

## THIRD YEAR—ELECTRICAL ENGINEERING

Adamo, Joseph J. 240 Elizabeth Street, N. Y. C.  
 Becker, Leonard 480 Powell Street, Brooklyn, N. Y.  
 Cardenas, Lovell F. 420 E. 10th Street, N. Y. C.  
 Connelly, William J. 134 Munro Boulevard, Valley Stream, N. Y.  
 Decker, Harold D. 934 E. 179th Street, Bronx, N. Y.  
 Gerhold, Robert A. 1230 E. Tremont Avenue, N. Y. C.  
 Golub, Edward E. 405 Quentin Road, Brooklyn, N. Y.  
 Grossman, Ben 454 Paulison Avenue, Passaic, N. J.  
 Haldi, Victor F. 41-49 54th Street, Woodside, N. Y.  
 Johnson, Charles H. 629 40th Street, Brooklyn, N. Y.  
 Stapleton, S. I.  
 Koenig, Fred V. 2356 26th Street, Astoria, L. I.  
 Kostriza, John A. 80 Brewster Street, Stapleton, S. I.  
 LeMaire, John A. 231 Otis Avenue, New Dorp, S. I.  
 Moser, Charles H. 50 Broadway, Rockville Centre, N. Y.  
 Nicholsberrg, Charles 5715 Snyder Avenue, Brooklyn, N. Y.  
 Partridge, William F. 215 W. 23rd Street, N. Y. C.  
 Pollyea, Myron H. 2105 E. 14th Street, Brooklyn, N. Y.  
 Reynolds, Thomas W. 326 High Street, Passaic, N. J.  
 Sandler, Albert 159 Beach 81st Street, Rockaway Beach, N. Y.  
 Schenker, Bernard 1308 Palisade Plaza, Hudson Heights, N. J.  
 Scully, John J. 791 Amsterdam Avenue, N. Y. C.  
 Seifried, Dean B. Main Street, New City, N. Y.  
 Shapiro, Jacob H. 91 Columbia Avenue, Passaic, N. J.  
 Stodola, Edwin K. 600 E. 26th Street, Brooklyn, N. Y.  
 Teitler, Albert 109-18 119th Street, Richmond Hill, N. Y.  
 Trella, John J. 540 Van Houten Avenue, Clifton, N. J.  
 Turkun, Hyman C. 638 Essex Street, Brooklyn, N. Y.  
 Weber, John A. 1265 College Avenue, Bronx, N. Y.

## THIRD YEAR—CHEMICAL ENGINEERING

Axelrod, Max 2142 E. 8th Street, Brooklyn, N. Y.  
 Cesaletti, Louis E. 19 Knapp Avenue, Clifton, N. J.  
 Cooper, George T. 318 Union Street, Jersey City, N. J.  
 Doran, Thomas R. 990 2nd Avenue, N. Y. C.  
 Dowden, Philip R. 1213 Vyse Avenue, N. Y. C.  
 Goldman, Louis 38 Myrtle Avenue, Spring Valley, N. Y.  
 Hankin, Harry 1937 Clinton Avenue, N. Y. C.  
 High, Roy V. 116 Sayre Street, Elizabeth, N. J.  
 Jud, Edwin J. 184-10 89th Avenue, Hollis, N. Y.  
 Kaplan, Gerald 80 Howe Avenue, Passaic, N. J.  
 Kisbany, Edward 444 83rd Street, Brooklyn, N. Y.  
 Kornovsky, George 1764 50th Street, Brooklyn, N. Y.  
 Leyes, Charles E. 347 Danforth Avenue, Jersey City, N. J.  
 Maltz, Joseph 335 E. 55th Street, N. Y. C.  
 Medoff, Jack I. 262 Hewes Street, Brooklyn, N. Y.  
 Motezik, Charles B. 30-59 48th Street, Long Island City, N. Y.  
 Pavlacka, Charles J. 1807 Crotona Avenue, N. Y. C.  
 Rosenberg, Harry E. 210 E. Henry Street, Linden, N. J.  
 Silver, Harold 352 E. 8th Street, Brooklyn, N. Y.  
 Smith, Hylas Walter 143-46 Franklin Avenue, Flushing, L. I.  
 Staatterman, Henry G. 480 143rd Street, Bronx, N. Y.  
 Stumpp, Charles L. 319 E. 197th Street, Bronx, N. Y.  
 Van Horn, James E. 106 Twombly Avenue, Bay Terrace, S. I.  
 Weinstein, Sidney R. 128 2nd Street, N. Y. C.  
 White, Robert R. 8 Flower Hill Place, Port Washington, N. Y.  
 Wilhelmy, Carl E. 117 34th Street, Union City, N. J.  
 Wolk, Morris 1372 Shakespeare Avenue, Bronx, N. Y.

## FOURTH YEAR—MECH. ENGINEERING

Baecher, Bernard J. 90-49 52nd Avenue, Elmhurst, L. I.  
 Brenner, Melvin M. 923 Barretto Street, N. Y. C.  
 Drutman, Jack 642 Lafayette Avenue, Brooklyn, N. Y.  
 Lehti, Henry J. 2719 Fenton Avenue, Bronx, N. Y.  
 McQuilkin, John H. 383 E. 198th Street, Bronx, N. Y.  
 Platts, Howard H. 38 Sylvan Street, Rutherford, N. J.  
 Shoor, Sam 115 Avenue N., Brooklyn, N. Y.



# THE \* C A B L E \* O F \* 1 9 3 5

Stefano, Nicholas M. .... 44 Franklin Avenue,  
Sea Cliff, N. Y.  
Zeitsoff, Samuel ..... 1641 65th Street, Brooklyn, N. Y.

## FOURTH YEAR—CIVIL ENGINEERING

✓ Berres, Daniel S. .... 2991 Brighton 13th Street,  
Brooklyn, N. Y.  
✓ Dubin, Milton ..... 2505 Lorillard Place, N. Y. C.  
✓ Edwards, Marcus G. .... 520 Hancock Street,  
Brooklyn, N. Y.  
✓ Hartman, Byron K. .... 86 Longview Avenue,  
Hackensack, N. J.  
✓ Henricksen, Arthur M. .... 7205 10th Avenue,  
Brooklyn, N. Y.  
✓ Hirschman, Paul ..... 131 E. 169th Street, Bronx, N. Y.  
✓ Jackson, D. Wirth ..... 21 George Street, Babylon, N. Y.  
✓ Kaplan, Hyman ..... 878 Longwood Avenue, N. Y. C.  
✓ Kumerdank, Albert W. .... 239 Battery Avenue,  
Brooklyn, N. Y.  
✓ Lyttle, James B. .... 3408 Barker Avenue, N. Y. C.  
✓ Penso, Leonard E. .... Crestwood Place,  
Great Neck, L. I.  
✓ Petersen, Perry H. .... 10217 129th Street,  
Richmond Hill, N. Y.  
✓ Ross, Joshua A. .... 362 17th Street, Brooklyn, N. Y.  
✓ Shapiro, Frederick ..... 482 Hancock Street,  
Brooklyn, N. Y.  
✓ Sottosanti, Sebastian J. .... 226 Bruce Park Avenue,  
Greenwich, Conn.

## FOURTH YEAR—ELECTRICAL ENGINEERING

Belkin, Isidore ..... 229 Stockton Street, Brooklyn, N. Y.  
D'Elia, Michael P. .... 13-84 E. 12th Street,  
Brooklyn, N. Y.  
Evans, Lewis M. .... 260 W. 44th Street, N. Y. C.  
Fischler, Albert ..... 3066 E. 5th Street, Brooklyn, N. Y.  
Friedland, Nathan ..... 2800 Bronx Park East, N. Y. C.  
Kendall, Robert ..... 110 Manchester Avenue,  
Paterson, N. J.

Lehning, Thomas C. .... 35-32 29th Street, Astoria, L. I.  
Levitsky, Joseph ..... 109 Clara Street, Brooklyn, N. Y.  
Milusich, Aloysius A. .... 24-43 32nd Street,  
Astoria, L. I.  
Munroe, David J. .... 27 Southard Avenue,  
Rockville Centre, N. Y.  
Peterson, Joel D. .... 485 W. 3rd Avenue, Roselle, N. J.  
Rosenfeld, Aaron ..... 1112 Gerard Avenue, N. Y. C.  
Slamovitz, Morris I. .... 91 Broadway, Paterson, N. J.  
Wolf, Charles A. .... 166 Stone Avenue, Yonkers, N. Y.

## FOURTH YEAR—CHEMICAL ENGINEERING

Cornacoff, Isadore ..... 81 Tulip Street, Passaic, N. J.  
Dunsay, Sol. H. .... 675 E. 233rd Street, N. Y. C.  
Ellis, William A. .... 10426 124th Street,  
Richmond Hill, L. I.  
Gladstone, Joseph ..... 328 E. 8th Street, N. Y. C.  
Gouguell, Boris ..... 200 E. 167th Street, N. Y. C.  
Kaplan, Stanley J. .... 1312 Leland Avenue, N. Y. C.  
Kuchinsky, Isadore ..... 171 Meade Avenue, Passaic, N. J.  
McGuinness, Thos. P. .... 1668 E. 10th Street,  
Brooklyn, N. Y.  
Molloy, Charles T. .... 1749 Kimball Street,  
Brooklyn, N. Y.  
Paz, Alfred ..... 20 St. Marks Place, N. Y. C.  
Pisetzner, Morris ..... 301 E. 120th Street, N. Y. C.  
Ross, Madeline ..... 25-74 33rd Street, Astoria, L. I.  
Shilitz, Saul ..... 52 22nd Street, West New York, N. J.  
Skelly, Joseph F. .... 1514 Albany Avenue,  
Brooklyn, N. Y.  
Suesholtz, Herbert D. .... 147 Ocean Avenue,  
Brooklyn, N. Y.  
Weyand, Robert W. .... 7612 Colonial Road,  
Brooklyn, N. Y.  
Winick, David S. .... 1501 Bryant Avenue, N. Y. C.  
Wolsky, Alexander ..... 260 Tompkins Avenue,  
New Hyde Park, L. I., N. Y.  
Zahn, Allen William ..... 122 New York Avenue,  
Baldwin, N. Y.  
Zuckerman, Henry ..... 464 E. 145th Street, N. Y. C.

## NIGHT ART SCHOOL ARCHITECTURAL DRAWING DEPARTMENT

### SECOND YEAR—SECTION 1

Black, Harold H. .... 114-03 128th Street,  
So. Ozone Park, L. I.  
Ciampa, Joseph D. .... 152 E. 113th Street, N. Y. C.  
Diaperdomenico, Steve ..... 185 Sackman Street,  
Brooklyn, N. Y.  
Frederickson, Charles A. .... 1842 Mulford Avenue,  
New York City  
Galgano, Anthony S. .... 816 Jackson Avenue, N. Y. C.  
Kaplowitz, Jacob ..... 301 Montgomery Street,  
Passaic, N. J.  
Karathanasis, Nicholas ..... 164 E. 33rd Street, N. Y. C.  
Markowski, Joseph P. .... 221 Eckford Street,  
Brooklyn, N. Y.  
Miller, Robert G. .... 24 Bay 31st Street, Brooklyn, N. Y.  
Mishure, Joseph M. .... 1444 Shakespeare Avenue,  
New York City  
Prestigiacomo, Vincent V. .... 1470 Bay Ridge Avenue,  
Brooklyn, N. Y.  
Riehl, Emil T. .... 2721 Creston Avenue, Bronx, N. Y.  
Schulman, Samuel V. .... 1054 Eastern Parkway,  
Brooklyn, N. Y.  
Solins, Daniel ..... 3728 Poplar Avenue, Brooklyn, N. Y.  
Trentin, Leonard E. .... 537 E. 87th Street, N. Y. C.

### SECOND YEAR—SECTION 2

Bassoff, William ..... 1304 Stebbins Avenue, Bronx, N. Y.  
DeLeo, Augustine ..... 963 E. 224th Street, N. Y. C.  
Friedman, Edward B. .... 906 Avenue N, Brooklyn, N. Y.  
Gentile, Walter G. .... 1903 147th Street,  
Whitestone, L. I.  
Greenberger, Jacob ..... 857 Forest Avenue, Bronx, N. Y.  
Kochman, Harry ..... 540 Hegeman Avenue,  
Brooklyn, N. Y.  
Maschi, Louis P. .... 29 E. Railroad Avenue,  
Tenafly, N. J.  
Murray, William ..... 23-43 33rd Avenue,  
Long Island City, N. Y.  
Racz, Armand ..... 788 Riverside Drive, N. Y. C.

Rollner, Saul ..... 315 Mt. Eden Avenue, N. Y. C.  
Slonim, Norman L. .... 1365 West 7th Street,  
Brooklyn, N. Y.  
Steinman, Jacob M. .... 625 Hemlock Street,  
Brooklyn, N. Y.  
Wechter, Hyman ..... 137 South 9th Street, Brooklyn, N. Y.  
Zabski, Thomas ..... 1114 3rd Avenue, N. Y. C.

### SECOND YEAR—SECTION 3

Bobkowski, Alfred A. .... 152 E. 84th Street, N. Y. C.  
Briglia, Edward T. .... 1267 5th Avenue, N. Y. C.  
De Seta, Vincent F. .... 1212 Ocean Avenue,  
Brooklyn, N. Y.  
Fleischman, Lloyd ..... 96 Wegman Parkway,  
Jersey City, N. J.  
Friedman, Irving ..... 1163 Stratford Avenue, Bronx, N. Y.  
Goerner, Emil H. .... 163 Valley Boulevard,  
Wood Ridge, N. J.  
Gorlach, Victor J. .... 4427 Monticello Avenue,  
Bronx, N. Y.  
Hopper, Richard G. .... 46 Washington Avenue,  
Suffern, N. Y.  
Levine, Morris J. .... 556 Crown Street, Brooklyn, N. Y.  
Papiroff, Irving H. .... 738 E. 176th Street, N. Y. C.  
Randmetz, Theodore M. .... 3751 18th Avenue,  
Brooklyn, N. Y.  
Rubin, Irving ..... 3005 Bedford Avenue, Brooklyn, N. Y.  
Sellnow, Donald E. .... 145-54 106th Avenue,  
Jamaica, N. Y.  
Schwartz, Jacob H. .... 109-01 Lefferts Avenue,  
Richmond Hill, N. Y.  
Tettelswaig, Ralph ..... 1786 Lexington Avenue, N. Y. C.  
Wittenberg, Theodore M. .... 1667 Nelson Avenue,  
Bronx, N. Y.

### THIRD YEAR—SECTION 1—CONSTRUCTION

Coruzzi, Alfred G. .... 242 E. 46th Street, N. Y. C.  
Dalton, Gerald F. .... 401 Vernon Avenue,  
Long Island City, N. Y.



# T H E \* C A B L E \* O F \* 1 9 3 5

Eller, Benjamin.....10 Ten Eyck Street, Brooklyn, N. Y.  
 Friedman, Seymour.....906 Avenue M, Brooklyn, N. Y.  
 Ingram, George H.....117 4th Street,  
 Ridgely Park, N. J.  
 Jensky, Arthur W.....500 Eastern Parkway,  
 Brooklyn, N. Y.  
 Leitner, Louis.....675 Linden Boulevard, Brooklyn, N. Y.  
 Montrose, Louis.....964 Eastern Parkway, Brooklyn, N. Y.  
 Oliveri, James.....2418 Cambrelens Avenue,  
 Bronx, N. Y.  
 Otranto, Alfred.....1642 69th Street, Brooklyn, N. Y.  
 Schenker, Hy J.....1471 St. Marks Avenue,  
 Brooklyn, N. Y.  
 Steingisser, Henry.....231 Second Avenue, N. Y. C.  
 Wildermuth, Edward E.....1375 Leland Avenue,  
 Bronx, N. Y.  
 Zuckerman, Albert A.....70 Rockaway Parkway,  
 Brooklyn, N. Y.

## THIRD YEAR—SECTION 2—CONSTRUCTION

Abbate, John A.....2199 Holland Avenue,  
 Bronx, N. Y.  
 Aht, Fred.....59-10 Catalpa Avenue, Brooklyn, N. Y.  
 Apostolou, Nicholas C.....86 Quentin Road,  
 Brooklyn, N. Y.  
 Clapman, Abraham.....443 W. 49th Street, N. Y. C.  
 Friedman, David W.....250 Grafton Street,  
 Brooklyn, N. Y.  
 Goldman, Sidney.....1761 81st Street, Brooklyn, N. Y.  
 Hartan, Bernard A.....246 W. 106th Street, N. Y. C.  
 Jensen, William E.....102 Decker Avenue,  
 Port Richmond, S. I.  
 Monak, Edmund G.....3128 Fairfield Avenue,  
 Bronx, N. Y.  
 Nuldig, F. Harry.....12 Chatham Place,  
 North Plainfield, N. J.  
 Rubenstein, Sigmund.....536 Hopkinson Avenue,  
 Brooklyn, N. Y.  
 Soverel, Sidney H., Jr.....453 State Street,  
 Brooklyn, N. Y.  
 Steinman, Morris M.....470 Paulison Avenue,  
 Passaic, N. J.  
 Tripoli, Nicholas.....3448 110th Street, Corona, L. I.

## THIRD YEAR—SECTION 3—CONSTRUCTION

Auerbach, Sam.....669 New Jersey Avenue,  
 Brooklyn, N. Y.  
 Brady, Edward J.....554 72nd Street, Brooklyn, N. Y.  
 Crimins, Arthur J.....166 Bergen Avenue,  
 Jersey City, N. J.  
 Elbaum, Mac C.....6007 21st Avenue, Brooklyn, N. Y.  
 Farley, Joseph E.....21 Convent Avenue, N. Y. C.  
 Huberman, Samuel.....1299 Eastern Parkway, N. Y. C.  
 Kaprowsky, Joseph.....312 Kosciuszko Street,  
 Brooklyn, N. Y.  
 LoBue, Frank R.....864 Cauldwell Avenue, Bronx, N. Y.  
 McDonough, Joseph F.....626 Sheridan Avenue,  
 Plainfield, N. J.  
 Orlansky, Reuben.....402 E. 65th Street, N. Y. C.  
 Pellegrinelli, Joseph H.....107-06 34th Avenue,  
 Corona, L. I.  
 Prochaska, Frank.....8447 Dana Court, Elmhurst, L. I.  
 Silleg, Albert.....4355 DeReimer Avenue, N. Y. C.  
 Stein, Milton B.....300 W. Broadway, Long Beach, N. Y.  
 Yacomelli, Alfred J.....97 Greenville Avenue,  
 Jersey City, N. J.

## THIRD YEAR—SECTION 1—DESIGN

Charleston, Murray J.....593 Van Sicklen Avenue,  
 Brooklyn, N. Y.  
 Colletti, Joseph.....12 Cedar Street, Brooklyn, N. Y.  
 DiPaola, Bernard.....556 River Street, Paterson, N. J.  
 Hanpashian, Edward A.....25-56 34th Street,  
 Long Island City, N. Y.  
 Holt, Fred A.....50 Washington Avenue,  
 Pearl River, N. Y.  
 Isaacs, Eric B.....521 W. 156th Street, N. Y. C.  
 Koch, Robert.....24-46 26th Street, Astoria, L. I.  
 Koszalka, John.....140 North 8th Street, Brooklyn, N. Y.  
 Merletto, Louis.....267 Cliff Street, Fairview, N. J.  
 Shimonsky, Edward.....212 E. 65th Street, N. Y. C.  
 Schroeder, Edward H.....Main Street, Pearl River, N. Y.  
 Wiiri, Paul T.....574 W. 176th Street, N. Y. C.

## THIRD YEAR—SECTION 2—DESIGN

Bello, Ferdinand.....213 E. 106th Street, N. Y. C.  
 Blaha, Frank.....40-15 72nd Street, Elmhurst, L. I.  
 Cantor, Louis.....197 Buffalo Avenue, Brooklyn, N. Y.

Drake, Margaret G.....1447 Troy Avenue,  
 Brooklyn, N. Y.  
 Friedman, Sol.....901 E. 172nd Street, N. Y. C.  
 Gulko, Samuel A.....641 E. 169th Street, N. Y. C.  
 Hoffzimer, Irving.....1231 43rd Street, Brooklyn, N. Y.  
 Rathofer, Alfred A.....165 Audubon Avenue, N. Y. C.  
 Tissenbaum, Samuel.....2068 Vyse Avenue, Bronx, N. Y.  
 Zinner, John R.....109 Laurel Street,  
 Ridgely Park, N. J.

## FOURTH YEAR—SEC. 1—CONSTRUCTION

Cafarelli, Ettore.....77 Ferris Avenue,  
 White Plains, N. Y.  
 Serracchio, Peter.....552 Ocean Avenue,  
 Jersey City, N. J.  
 Cohen, David A.....1121 W. Farms Road, Bronx, N. Y.  
 Cohen, Julius.....594 Union Avenue, Bronx, N. Y.  
 Freeman, George W.....92-06 173rd Street, Hillside, L. I.  
 Gervasi, Richard J.....1624 Summerfield Street,  
 Brooklyn, N. Y.  
 Hesselton, Harold P.....1152 Simpson Street,  
 Bronx, N. Y.  
 McGowan, John.....106 W. 105th Street, N. Y. C.  
 Moline, Edward J.....2064 Nostrand Avenue,  
 Brooklyn, N. Y.  
 Perla, Charles V.....958 Gillies Avenue,  
 North Bergen, N. J.  
 Rocca, William.....  
 Stern, Tobias.....4103 12th Avenue, Brooklyn, N. Y.  
 Szaloczi, James.....563 Cauldwell Avenue, Bronx, N. Y.  
 Tesoriero, Dominick.....7711 5th Avenue, Brooklyn, N. Y.  
 Weinpell, George C.....106 Sherman Street,  
 Passaic, N. J.  
 Zellermayer, Milton.....2077 Vyse Avenue, N. Y. C.

## FOURTH YEAR—SEC. 2—CONSTRUCTION

Bock, Frederick T.....144-18 231st Street,  
 Springfield Gardens, L. I.  
 Darwas, Frank J.....912 E. 169th Street, N. Y. C.  
 de la Parra, David J.....118-16 Farmers Boulevard,  
 St. Albans, L. I.  
 Levitz, Herman B.....438 E. 103rd Street, Brooklyn, N. Y.  
 Markard, Otto.....61-15 Madison Street, Brooklyn, N. Y.  
 Monteferrante, Hugo.....2446 Lorillard Place,  
 Bronx, N. Y.  
 Morard, Louis C.....61 W. 73rd Street, N. Y. C.  
 Nachmann, Harold M.....2020 Walton Avenue,  
 Bronx, N. Y.  
 Olsen, Olaf C.....227 Union Street, Brooklyn, N. Y.  
 Palmeri, Joseph.....44 Palmer, Passaic, N. J.  
 Rosen, Bernard J.....54 Evelyn Place, Bronx, N. Y.  
 Schepper, Norman G.....4214 Carpenter Avenue,  
 Bronx, N. Y.  
 Schmidt, Otto G.....1312 Adea Avenue, Bronx, N. Y.  
 Weter, Harold L.....130-34 119th Street,  
 So. Ozone Park, N. Y.

## FOURTH YEAR—SEC. 3—CONSTRUCTION

Apatov, Abraham.....451 Grand Street, N. Y. C.  
 Asnin, Benjamin.....9024 Avenue F, Brooklyn, N. Y.  
 Brody, Nathan N.....105 Clinton Street, N. Y. C.  
 Gordon, Frank.....1893 Andrews Avenue, Bronx, N. Y.  
 Leibowitz, Hyman.....66 Lewis Avenue, Brooklyn, N. Y.  
 Lerario, Francis L.....35-33 31st Street,  
 Long Island City, N. Y.  
 Murray, Daniel.....324 North Avenue,  
 New Rochelle, N. Y.  
 Rosenthal, David.....1626 E. 4th Street, Brooklyn, N. Y.  
 Stamm, Charles J.....528 E. 149th Street, Bronx, N. Y.  
 Tillberg, Carl R.....319 Hamilton Avenue,  
 Hasbrouck Heights, N. J.

## FOURTH YEAR—SECTION 1—DESIGN

Anastasia, Alfred A.....1723 Beverly Road, B'klyn, N. Y.  
 Ambruzs, Joseph.....157 Avenue F, Bayonne, N. J.  
 Dingenthal, Julius.....1265 Walton Avenue, Bronx, N. Y.  
 Drantch, Albert.....207 Rodney Street, Brooklyn, N. Y.  
 Lacks, Irving.....1118 Lincoln Place, Brooklyn, N. Y.  
 Lee, Albert L.....5 W. 63rd Street, N. Y. C.  
 Noble, S. Martin.....10 Monroe Street, N. Y. C.  
 Ross, Simon.....176 Pennsylvania Avenue,  
 Brooklyn, N. Y.  
 Schimmenti, Marianno.....59-20 Fresh Pond Road,  
 Maspeth, N. Y.  
 Smith, Frank J.....392 1st Street, Brooklyn, N. Y.



# T H E \* C A B L E \* O F \* 1 9 3 5

## FOURTH YEAR—SECTION 2—DESIGN

Bertucci, Joseph P. 711 Bartholdi Street, N. Y. C.  
 D'Elcio, Stephen 1245 73rd Street, Brooklyn, N. Y.  
 Jahrling, Francis A. 130-13 146th Street,  
 So. Ozone Park, L. I.  
 Lisinichia, Michael A. 500 E. 11th Street, N. Y. C.  
 Romond, Gustave L. 510 Alexander Avenue,  
 Linden, N. J.  
 Russo, Joseph 7517 11th Avenue, Brooklyn, N. Y.  
 Seiderman, Nat. 123 E. 94th Street, Brooklyn, N. Y.  
 Sindelar, Edward F. 430 E. 89th Street, N. Y. C.  
 Smith, Bernhard R. 81 Featherbed Lane, N. Y. C.  
 Tomash, Arthur 8640 21st Avenue, Brooklyn, N. Y.  
 Wacker, Henry G. 71-28 68th Street, Glendale, L. I.  
 Ward, C. Carmer 714 Dixie Lane, Plainfield, N. J.

## ART DEPARTMENT

### FIRST YEAR—SECTION A

Backman, Austra 2466 Marion Avenue, Bronx, N. Y.  
 Barbera, Joseph R. 262 E. 26th Street, N. Y. C.  
 Barnes, Edward W. 10 Myrtle Street,  
 White Plains, N. Y.  
 Behm, Albert W. 1765 71st Street, Brooklyn, N. Y.  
 Bender, Elias N. 2487 Davidson Avenue,  
 Bronx, N. Y.  
 Bender, Milton 133 E. 55th Street, c/o Itzkowitz,  
 Brooklyn, N. Y.  
 Bendiner, Stanley E. 654 W. 161st Street, N. Y. C.  
 Bennett, Joseph E. 2164 Grand Avenue, Bronx, N. Y.  
 Berlin, Carl 710 Foster Avenue, Brooklyn, N. Y.  
 Beyer, Alfred M. 82-46 Lefferts Boulevard,  
 Richmond Hill, N. Y.  
 Blackman, William E. 828 St. Nicholas Avenue,  
 New York City  
 Bobkowski, Vincent 152 E. 84th Street, N. Y. C.  
 Boxenbaum, Sam 26 Montgomery Street, N. Y. C.  
 Brown, Joseph A. 916 Lincoln Place, Brooklyn, N. Y.  
 Buchanan, Robert 109 E. 87th Street, N. Y. C.  
 Cappy, Frank H. 30-49 29th Street, Astoria, L. I.  
 Carlin, James J. 635 Sterling Place, Brooklyn, N. Y.  
 Carlson, Ralph A. 156 69th Street, Brooklyn, N. Y.  
 Carmellino, Sebastian J. 367 5th Street,  
 Brooklyn, N. Y.  
 Carroll, Constantine 543 W. 129th Street, N. Y. C.  
 Centner, John J. 1660 White Plains Avenue,  
 Bronx, N. Y.  
 Chall, Sally 31 W. 110th Street, N. Y. C.  
 Cihazeski, Holly T. 766 42nd Street, Brooklyn, N. Y.  
 Cohen, David G. 141 Webster Avenue,  
 Jersey City, N. J.  
 Corrigan, John J. 3547 64th Street, Woodside, L. I.  
 Dalton, Henry H. 2491 Broadway, N. Y. C.  
 Davenport, James E. 8751 110th Street,  
 Richmond Hill, N. Y.

### FIRST YEAR—SECTION B

Cohen, Henry 500 Madison Street, Brooklyn, N. Y.  
 Downing, Edward D. 969 Trinity Avenue, N. Y. C.  
 Driscoll, Jack J. 601 W. 190th Street, N. Y. C.  
 Eiermann, Betty E. 3965 47th Street, Sunnyside, L. I.  
 Eisner, Jack 321 W. 76th Street, N. Y. C.  
 Epstein, Edward 11-15 12th Street,  
 Long Island City, N. Y.  
 Ferber, Milton 92 2nd Avenue, N. Y. C.  
 Firtenberg, Theodore 375 E. Moshulu Parkway, No.,  
 Bronx, N. Y.  
 Fischer, Martin 957 Simpson Street, Bronx, N. Y.  
 Gauthier, Inez B. 317 E. 17th Street, N. Y. C.  
 Gerasimchik, John 1405 Avenue Y, Brooklyn, N. Y.  
 Glazer, Solomon 647 Stone Avenue, Brooklyn, N. Y.  
 Golden, Philip 1214 Wheeler Avenue, Bronx, N. Y.  
 Goring, George R. 161-06 72nd Avenue,  
 Flushing, N. Y.  
 Gradischer, Helen I. 325 E. 31st Street, N. Y. C.  
 Greenberg, Barbara L. 1035 E. 27th Street,  
 Brooklyn, N. Y.  
 Greenfield, Hilda 454 E. 180th Street, N. Y. C.  
 Greiser, Rudolph F. 106 W. 13th Street, N. Y. C.  
 Harvenak, J. Wallace 557 Myrtle Avenue,  
 Brooklyn, N. Y.  
 Heller, Richard V. 8507 112th Street,  
 Richmond Hill, N. Y.  
 Hochman, Louis 8420 20th Avenue, Brooklyn, N. Y.  
 Hof, John G. 361 49th Street, Brooklyn, N. Y.  
 Jasinski, Edmund K. 410 Lafayette Avenue,  
 Passaic, N. J.  
 Jedney, John E. 57 Vermilyea Avenue, Inwood, N. Y.  
 Johnson, Arthur 624 E. 17th Street, N. Y. C.

Jury, Milton L. 120 Vermilyea Avenue, N. Y. C.  
 Kacerow, Frank J. 965 E. 31st Street, Brooklyn, N. Y.  
 Killoran, Orville J. 57 Roosevelt Avenue,  
 Jersey City, N. J.  
 Kadow, Howard W. 901 Cranford Avenue, N. Y. C.  
 Kiebanow, Hy 264 E. 199th Street, Bronx, N. Y.

## FIRST YEAR—SECTION C

Koke, Richard J. 133 W. 81st Street, N. Y. C.  
 Komara, Joseph M. 1436 York Avenue, N. Y. C.  
 Komis, Herman E. 1348 1st Avenue, N. Y. C.  
 Lankenau, Henry P. 86 Glenwood Avenue,  
 Leonia, N. J.  
 Levine, Jack J. 1341 E. 7th Street, Brooklyn, N. Y.  
 Lippe, Herman H. 124 Bay 37th Street,  
 Brooklyn, N. Y.  
 Lubin, David 123 Fountain Avenue, Brooklyn, N. Y.  
 Lumley, Kenneth F. 1624 Edmund Terrace,  
 Union City, N. J.  
 Lutz, Kathryn M. 514 Chauncey Street, Brooklyn, N. Y.  
 Machlanski, Henry 1246 E. 223rd Street, N. Y. C.  
 Manheim, Jay 1739 Dahill Road, Brooklyn, N. Y.  
 Margolies, Sam 156 Lewis Street, N. Y. C.  
 May, George J. 228 E. 236th Street, Bronx, N. Y.  
 Mazzarella, Daniel J. 25 North Henry Street,  
 Brooklyn, N. Y.  
 McGinnis, Charles E. 46 Richmond Avenue,  
 Paterson, N. J.  
 Meriwether, John D. 195 Baldwin Avenue,  
 Jersey City, N. J.  
 Mikulec, Charles 9 Albany Street, N. Y. C.  
 Moskwa, Helen 150 7th Avenue, Brooklyn, N. Y.  
 Nalbach, Ottilie F. 814 Wyckoff Avenue,  
 Ridgewood, N. Y.  
 Nichols, Hilliard L. 490 Boulevard, Bayonne, N. J.  
 Nicolett, Charles 292 Essex Street, Brooklyn, N. Y.  
 Ossi, Peter A. 39 Florence Place, E. Paterson, N. J.  
 Panicci, Elio W. 60 Perry Street, N. Y. C.  
 Peltola, Carl O. 263 Longworth Avenue,  
 Hasbrouck Heights, N. J.  
 Pressman, Irving L. 215 E. 164th Street, N. Y. C.  
 Prezekop, Peter 65 E. 4th Street, Astoria, L. I.  
 Prezzi, John J. 26-34 4th Street, Astoria, L. I.  
 Rosenfeld, Rubin 1414 Bronx River Avenue, N. Y. C.

## FIRST YEAR—SECTION D

Krauss, Lester L. 278 Fountain Avenue, Brooklyn, N. Y.  
 Rabinowitz, Nathan 3320 Mermaid Avenue,  
 Brooklyn, N. Y.  
 Roberts, Jennie M. 141 E. 44th Street, N. Y. C.  
 Rosenbaum, Morris J. 80 Norton Street,  
 Brooklyn, N. Y.  
 Rubin, Hyman 1010 Intervale Avenue, Bronx, N. Y.  
 Rubin, Sol 65 Fort Washington Avenue, N. Y. C.  
 Ruhlman, George 1490 E. 2nd Street, Brooklyn, N. Y.  
 Rump, Norman L. 35-21 149th Street, Flushing, L. I.  
 Sager, Everett W. 3514 Wayne Avenue,  
 Bronx, N. Y.  
 Schaller, Harold J. 34-47 80th Street,  
 Jackson Heights, N. Y.  
 Schreiber, Sol 42 Jackson Street, N. Y. C.  
 Schroeder, Hugo F. 619 E. 134th Street, N. Y. C.  
 Semp, Henry 380 E. 173th Street, N. Y. C.  
 Simon, Percy S. 1278 Grand Concourse, N. Y. C.  
 Slacovich, Francis A. 238 26th Street,  
 Guttenberg, N. J.  
 Smalle, Edwin J. 461 W. 44th Street, N. Y. C.  
 Smith, Margaret S. 152 E. 22nd Street, N. Y. C.  
 Sprinkle, Ralph E. 120 E. 22nd Street, N. Y. C.  
 Stohl, Milton H. 2056 Davidson Avenue, N. Y. C.  
 Supko, Charles J. 18 Van Buren Street, Passaic, N. J.  
 Swit, Frank J. 53 Elm Place, Amityville, L. I.  
 Taaffe, Maurice J. 484 W. 165th Street, N. Y. C.  
 Titolo, Lucy 1665 84th Street, Brooklyn, N. Y.  
 Trapani, Joseph A. 610 E. 182 Street, N. Y. C.  
 Venezia, Samuel R. Lincoln Avenue,  
 Cliffside Park, N. J.  
 Wack, Arthur E. 778 Macon Street, Brooklyn, N. Y.  
 Warnken, Henry Jr. 427 E. 69th Street, N. Y. C.  
 Weiss, Irving 1718 Washington Avenue, Bronx, N. Y.  
 Weiss, Nicholas 2033 E. 35th Street, Brooklyn, N. Y.  
 Whiteside, Robert 590 W. 172nd Street, N. Y. C.  
 Willms, Roy C. 255 Parkville Avenue, Brooklyn, N. Y.  
 Windvand, John A. 1665 71st Street, Brooklyn, N. Y.

## SECOND YEAR—SECTION A

Davis, Emanuel 1408 E. 98th Street, Brooklyn, N. Y.  
 Egdell, Norman 556 W. 191st Street, N. Y. C.



# T H E \* C A B L E \* O F \* 1 9 3 5

Evanoft, Vladimir.....437 E. 5th Street, N.Y.C.  
Grossman, Louis.....150-15 Shore Avenue, Jamaica, L.I.  
Fay, Hugh.....196 Eldert Lane, Brooklyn, N.Y.  
Foxe, Josephine.....512 Cleveland Street, Brooklyn, N.Y.  
Winnick, Jack.....124 Hopkins Street, Brooklyn, N.Y.

## SECOND YEAR—SECTION B

Kaufman, Joseph.....71 Vermilyea Avenue, N.Y.C.  
Payes, Helen C.....4723 New Utrecht Avenue,  
Brooklyn, N.Y.  
Petersen, John.....2865 W. 16th Street, Brooklyn, N.Y.  
Pons, Wilfred F.....1567 Broadway, Brooklyn, N.Y.  
Puvogel, Norma T.....85-24 Grand Avenue,  
Elmhurst, N.Y.  
Rabinowitz, Dorothy M.....349 Gregory Avenue,  
Passaic, N.J.  
Radocz, Albert W.....36-03 23rd Avenue,  
Long Island City  
Reif, Rubin.....7217 3rd Avenue, Brooklyn, N.Y.  
Rose, William.....239 E. 14th Street, N.Y.C.  
Rosenberg, Morris.....710 W. 173rd Street, N.Y.C.  
Rowe, John.....524 Park Avenue, Weehawken, N.J.

## SECOND YEAR—SECTION C

Calamaras, Helene.....235 E. 12th Street, N.Y.C.  
Eriksen, Gustav A.....585 Hudson Avenue,  
West New York, N.J.  
Futuyma, Roman J.....597 E. 164th Street, N.Y.C.  
Gibbins, John T.....2505 University Avenue,  
Bronx, N.Y.  
Goldberg, Selma M.....227 Audubon Avenue, N.Y.C.  
Lemchen, Helen.....768 Boulevard, Bayonne, N.J.  
Lugscheider, Frances J.....45 Barrow Street, N.Y.C.  
Rilipsky, Lawrence N.....2526 Bronx Park East,  
Bronx, N.Y.  
Rabinowitz, Isidore.....540 E. 84th Street, N.Y.C.  
Schwartz, Fred.....1530 Sheridan Avenue, N.Y.C.  
Spector, Julius J.....235 E. 196th Street, Bronx, N.Y.  
Stein, Richard G.....120 W. 70th Street, N.Y.C.  
Stock, Jack H.....2927 W. 5th Street, Brooklyn, N.Y.  
Stone, Daniel.....1957 67th Street, Brooklyn, N.Y.  
Stone, Irving E.....1290 Grand Concourse, Bronx, N.Y.  
Teckyon, Calvin.....963 Prospect Avenue, Bronx, N.Y.  
Tierney, William J.....207 Avenue T, Brooklyn, N.Y.  
Touby, Nathan N.....490 Ocean Parkway, Brooklyn, N.Y.  
Vasku, Victor K.....544 E. 89th Street, N.Y.C.  
Walsh, Marjorie.....832 Pettit Avenue, Elmhurst, L.I.  
Whiteford, Frank.....2148 35th Street, Astoria, L.I.  
Zotzmann, Richard.....1165 Gerard Avenue, N.Y.C.

## PICTORIAL DESIGN

### SECOND YEAR—SECTION D

Beutel, Howard.....46 Beaver Street, Brooklyn, N.Y.  
Brill, Sydelle.....1440 Third Avenue, N.Y.C.  
Byrne, Robert E.....95-17 Liverpool Street,  
Jamaica, N.Y.  
Cain, Catherine J.....158 W. 15th Street, N.Y.C.  
Cividanes, Frank J.....145 Perry Street, N.Y.C.  
Conover, Sam.....150 Tory Street, Corona, N.Y.  
Cooperman, Morton.....3335 Bouck Avenue, N.Y.C.  
Cramblitt, Walter E.....8741 118th Street,  
Richmond Hill, N.Y.  
Cunningham, Joy.....320 W. 105th Street, N.Y.C.  
Dalldorf, Charles J.....656 88th Street, Brooklyn, N.Y.

## SECOND YEAR—SECTION E

Goldberg, Sidney.....96-04 Northern Boulevard,  
Corona, N.Y.  
Goodman, Blanche.....67-17 Woodside Avenue,  
Winfield, N.Y.  
Holmes, Madeline.....8 Bonn Place, Weehawken, N.J.  
Hulihan, Frederick.....870 President Street,  
Brooklyn, N.Y.  
Ihlenberg, Ruth A.....183 Etna Street, Brooklyn, N.Y.  
Johanny, Arnold F.....360 Wadsworth Avenue, N.Y.C.  
Kassoy, Bernard.....505 E. 140th Street, N.Y.C.  
Kasakoff, David.....964 Forest Avenue, Bronx, N.Y.  
Kriete, Frank M.....521 Dunellen Avenue,  
Dunellen, N.J.  
Leotta, Samuel S.....616 W. 204th Street, N.Y.C.  
Lopez, Manuel J.....615 Prospect Place, Brooklyn, N.Y.  
Mandolini, Peter E.....2115 Linden Street,  
Ridgewood, L.I.  
McGovern, Edward P.....390 Princeton Avenue,  
Jersey City, N.J.  
Miller, Florence.....2754 Grand Concourse,  
Bronx, N.Y.  
Novis, Harold.....6814 21st Avenue, Brooklyn, N.Y.

Panica, Louis C.....190 Montauk Avenue,  
Brooklyn, N.Y.  
Phillips, Edith V.....257 W. 12th Street, N.Y.C.  
Raffo, Stephen A.....104 Oak Street, Weehawken, N.J.  
Lindauer, Herbert S.....3096 E. 6th Street,  
Brooklyn, N.Y.  
Murray, Louis.....285 E. 142nd Street, N.Y.C.

## SECOND YEAR—FASHION ILLUSTRATION

Faltot, Clara L.....503 Hoyer Street, Woodcliff, N.J.

## PICTORIAL DESIGN

### THIRD YEAR—SECTION A

Block, Milton A.....1378 Teller Avenue, N.Y.C.  
Bonser, William D.....59 Middleton Street,  
Brooklyn, N.Y.  
Boruch, Frank.....19 E. 21st Street, Bayonne, N.J.  
Brill, Arthur X.....388 Sackett Street, Brooklyn, N.Y.  
Conzani, Anna M.....193 Essex Street, Brooklyn, N.Y.  
Cooper, Milton H.....2380 Creston Avenue,  
Bronx, N.Y.  
Cuomo, Guy J.....426 W. 160th Street, N.Y.C.  
DeLorenzo, Maurice T.....8014 Fifth Avenue,  
Brooklyn, N.Y.  
Dermod, John T.....419 16th Street, Brooklyn, N.Y.  
Dever, Hugh A.....8804 Commonwealth Boulevard,  
Bellerose, L.I.  
Dreiblatt, Milton L.....264 E. 2nd Street, N.Y.C.  
Ducker, Aaron.....476 E. 98th Street, Brooklyn, N.Y.  
O'Neal, Olive S.....9516 111th Street,  
Richmond Hill, N.Y.

## PICTORIAL DESIGN

### THIRD YEAR—SECTION B

Deutsch, Hilda G.....223 Second Avenue, N.Y.C.  
Dingilian, Dikran A.....601 W. 184th Street, N.Y.C.  
Markowitz, Murray L.....16 E. 120th Street, N.Y.C.  
Ostuni, Peter W.....4310 Richardson Avenue, N.Y.C.  
Pepperman, Sam.....8 Sumner Avenue, Brooklyn, N.Y.  
Physioc, Frances F.....Roxbury Road, Stamford, Conn.  
Reich, Sydney Harold.....693 Logan Street,  
Brooklyn, N.Y.  
Reisig, Mabel F.....123 W. 13th Street, N.Y.C.  
Schlein, Frieda B.....129 Rivington Street, N.Y.C.  
Steele, Yvonne E.....44 Merritt Avenue,  
Tuckahoe, N.Y.

## PICTORIAL DESIGN

### THIRD YEAR—SECTION C

Hayes, Edna M.....9713 75th Street, Ozone Park, L.I.  
Kadison, Grace J.....2092 Davidson Avenue, N.Y.C.  
Kasazkow, Benjamin J.....2439 Barker Avenue,  
Bronx, N.Y.  
Langer, Robert I.....1436 Beach Avenue, Bronx, N.Y.

## PICTORIAL DESIGN

### THIRD YEAR—SECTION D

Klieger, Harry M.....211 Beach 68th Street,  
Arverne, L.I.  
Sarlin, Louis.....371 Rodney Street, Brooklyn, N.Y.  
Spieler, Ruth.....2085 Walton Avenue, Bronx, N.Y.  
Tempel, Nathan I.....864 E. 149th Street, N.Y.C.  
Tepper, Sol.....1859 73rd Street, Brooklyn, N.Y.  
Verman, William.....990 Bronx Park South, Bronx, N.Y.

## PICTORIAL DESIGN

### THIRD YEAR—SECTION E

Connell, Virginia M.....651 Evergreen Avenue,  
Brooklyn, N.Y.  
Jacobson, Leon.....3004 Olinville Avenue, Bronx, N.Y.

## THIRD YEAR—ADVERTISING DESIGN

Bauer, Max M.....482 E. 142nd Street, N.Y.C.  
Bourdon, Zygmund J.....3257 36th Street,  
Long Island City, N.Y.  
Canales, Ariel.....218 W. 72nd Street, N.Y.C.  
Clapp, Naomi G.....1232 Webster Avenue, Bronx, N.Y.  
Dwyer, Vincent H.....3723 92nd Street,  
Jackson Heights, L.I.  
Greenbaum, Louis.....1379 Bristow Street, N.Y.C.  
Laiken, David B.....132-09 Maple Avenue, Flushing, L.I.  
Manfredi, Nicholas.....2427 Belmont Avenue, Bronx, N.Y.  
Mathewson, Theodore.....44 Tibbetts Road,  
Yonkers, N.Y.



# THE \* CABLE \* OF \* 1935

McNutt, Harriet H. 443 95th Street, Brooklyn, N. Y.  
 Saxon, Bernard 672 W. 204th Street, N. Y. C.  
 Schneeberg, William J. 416 E. 28th Street,  
 Brooklyn, N. Y.  
 Suto, Akos 1016 Bryant Avenue, Bronx, N. Y.  
 Weber, Samuel S. 899 Hackensack Plankroad,  
 North Bergen, N. J.  
 Wright, Joseph R. 22 Duncan Avenue,  
 Jersey City, N. J.  
 Zeveloff, Leo L. 926 51st Street, Brooklyn, N. Y.

## PICTORIAL DESIGN

### THIRD YEAR—FASHION ILLUSTRATION

Abrams, Julia E. 991 President Street,  
 Brooklyn, N. Y.  
 Gould, Alice 940 E. 174th Street, Bronx, N. Y.  
 Meersand, Kay 480 St. Paul's Place, Bronx, N. Y.  
 Scott, Earl 409 Edgecombe Avenue, N. Y. C.

## PICTORIAL DESIGN

### FOURTH YEAR—SECTION A

Bernstein, Julius V. 993 Union Avenue, Bronx, N. Y.  
 Bjerke, Otto C. 8709 Fifth Avenue, Brooklyn, N. Y.  
 Blecker, Heron 2240 84th Street, Brooklyn, N. Y.  
 Champagne, Charles H. 473 St. John's Place,  
 Brooklyn, N. Y.  
 Cordaro, Joseph J. 232 McKibbin Street,  
 Brooklyn, N. Y.  
 D'Esposito, George 104-13 115th Street,  
 Richmond Hill, N. Y.  
 Dworetzky, Ben 334 Montgomery Street,  
 Brooklyn, N. Y.  
 Eccher, Alexander A. 97 15th Street, Brooklyn, N. Y.  
 Eisele, Walter W. 679 Eagle Avenue, Bronx, N. Y.  
 Frattini, Aldo C. 1062 Rhineland Avenue,  
 Bronx, N. Y.  
 Gallo, Vito A. 3410 61st Street, Woodside, L. I.  
 Garatti, Arthur J. 90 Bedford Street, N. Y. C.

## PICTORIAL DESIGN

### FOURTH YEAR—SECTION B

Glenum, Harry 9 Gay Street, N. Y. C.  
 Gold, Ralph F. 486 Williams Avenue, Brooklyn, N. Y.  
 Goldberg, Carl 1565 Thieriot Avenue, Bronx, N. Y.  
 Goldstein, Jacob 3039 Wallace Avenue, N. Y. C.  
 Goldstein, Irving M. 259 Keap Street, Brooklyn, N. Y.  
 Gorlach, Edmund T. 3220 Steuben Avenue,  
 Bronx, N. Y.  
 Griffith, Herbert T. 142 E. 18th Street, N. Y. C.  
 Hallex, John R. 312 Palmetto Street, Brooklyn, N. Y.  
 Kozak, Karl J. 352 E. 84th Street, N. Y. C.  
 Puccio, John J. 821 Willoughby Avenue,  
 Brooklyn, N. Y.  
 Salmieri, Frank J. 373 12th Street, Brooklyn, N. Y.

## PICTORIAL DESIGN

### FOURTH YEAR—SECTION C

Klein, Abraham 1291 Hoe Avenue, N. Y. C.  
 Leggio, James 46 Lewis Avenue, Brooklyn, N. Y.  
 Mehlman, Bernard 1916 Grand Concourse,  
 Bronx, N. Y.  
 Sauerwald, Frederick W. 1024 Halsey Street,  
 Brooklyn, N. Y.

## PICTORIAL DESIGN

### FOURTH YEAR—SECTION D

Cohen, Max 1566 Eastern Parkway, Brooklyn, N. Y.  
 Schnee, Milton 103 Avenue A, N. Y. C.  
 Skolnik, Jack P. 827 Union Avenue, Bronx, N. Y.  
 Spagnolo, Frank 1841 Bronxdale Avenue, Bronx, N. Y.  
 Steinman, Louis 625 Hemlock Street, Brooklyn, N. Y.  
 Tucci, Peter C. 46 Exchange Place,  
 Port Chester, N. Y.  
 Weinstein, Marcus 248 Fowler Avenue,  
 Jersey City, N. J.  
 Weissbach, Jack 1103 Myrtle Avenue, Brooklyn, N. Y.  
 Werner, Albert 214 Audubon Avenue, N. Y. C.  
 Wilson, Henry 193 Monroe Street, N. Y. C.

## FURNITURE DESIGN

### SECOND, THIRD AND FOURTH YEAR

Bockes, Inez Beulah 626 West 165th Street, N. Y. C.  
 Casagrande, Oreste M. 719 27th Street,  
 Union City, N. J.  
 Galati, Corrado P. 2245 W. First Street,  
 Brooklyn, N. Y.  
 Gasser, Edward 31-37 35th Street, Astoria, L. I.  
 Grenier, J. Alfred 2543 McIntosh Street  
 East Elmhurst, L. I.  
 Gunkel, Marjorie D. 41-06 50th Street, Woodside, L. I.  
 Knapp, Margaret B. 190 Throop Avenue,  
 Brooklyn, N. Y.  
 Meyer, Adeline T. 4243 Carpenter Avenue,  
 Bronx, N. Y.  
 Page, Evelyn R. 231 W. 13th Street, N. Y. C.  
 Pradi, Carolyn M. 5320 94th Street, Elmhurst, L. I.  
 Spielman, Herbert S. 976 Tinton Avenue, N. Y. C.  
 Wexler, Monroe S. 1878 Harrison Avenue,  
 Bronx, N. Y.

## LIFE MODELING

### SECOND, THIRD AND FOURTH YEAR

Balaban, William P. 145 Second Avenue, N. Y. C.  
 DeSanna, Anthony F. 736 52nd Street, Brooklyn, N. Y.  
 DiTore, Salvatore 510 8th Street, Brooklyn, N. Y.  
 Judelle, Albert J. 105 Clarke Place, Bronx, N. Y.  
 Lewensohn, Sam 654 Dahill Road, Brooklyn, N. Y.  
 Virzera, Salvatore E. Box 166, Howard Beach,  
 Long Island, N. Y.

## ARCHITECTURAL MODELING

### SECOND AND THIRD YEAR

Covit, John A., Jr. 142 Brook Avenue,  
 Oakwood Heights, S. I.  
 Dreibratt, Fubin W. 1600 University Avenue,  
 Bronx, N. Y.  
 Folding, Joseph 2530 95th Street,  
 Jackson Heights, L. I.  
 Lewensohn, Ben 2138 Tomlinson Avenue, Bronx, N. Y.

## ADVERTISING DESIGN

### POST GRADUATE STUDENTS

Bronstein, Ben 1739 63rd Street, Brooklyn, N. Y.  
 Ciccarelli, Lucy 337 E. 116th Street, N. Y. C.  
 Diesner, Edward S. 1406 Webster Avenue,  
 Bronx, N. Y.  
 Dommeyer, Hermann 1498 Third Avenue, N. Y. C.  
 Gardner, Victor J. 106-09 New York Avenue,  
 Jamaica, N. Y.  
 Haas, Frank, Jr. 317 E. 71st Street, N. Y. C.  
 Holm, William E. 201 Rathbun Avenue,  
 Annadale, S. I.  
 Izzo, Louis J. 1049 73rd Street, Brooklyn, N. Y.  
 Krackow, Louis W. 185 Avenue P, Brooklyn, N. Y.  
 Lesser, Harold 1252 Manor Avenue, Bronx, N. Y.  
 Maly, Frances M. 7015 36th Avenue,  
 Jackson Heights, L. I.  
 Mater, Pauline E. 60 Gates Avenue, Jersey City, N. J.  
 Meister, Harry 117 Liberty Avenue, Brooklyn, N. Y.  
 O'Mealy, Howard A. 4633 Carpenter Avenue,  
 Bronx, N. Y.  
 Roessner, Leonard N. 136 Crystal Street,  
 Brooklyn, N. Y.  
 Snyder, Jack V. 450 95th Street, Brooklyn, N. Y.  
 Steinberg, Hyman H. 336 Throop Avenue,  
 Brooklyn, N. Y.  
 Sweeten, Elizabeth R. 2033 E. 19th Street,  
 Brooklyn, N. Y.  
 Zvacs, Joseph L. 560 W. 160th Street, N. Y. C.

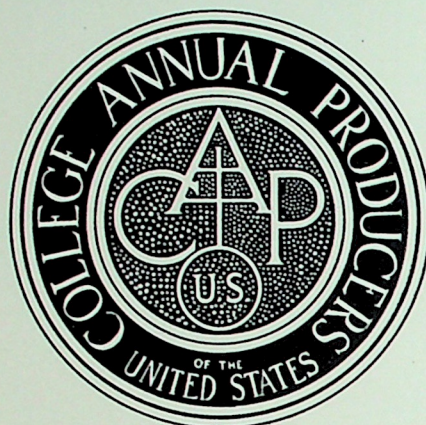
## FASHION ILLUSTRATION

Brown, Ruth D. 1478 So. Boulevard, Bronx, N. Y.  
 Carney, Catherine 2719 Sedgwick Avenue,  
 Bronx, N. Y.  
 Centner, Juliet 19 Seaman Avenue, N. Y. C.  
 Merzon, Shirley 754 Mace Avenue, Bronx, N. Y.  
 Russo, Gaetano 56 Goerck Street, N. Y. C.  
 Van West, Marjorie E. 718 W. 178th Street, N. Y. C.  
 Yarnell, Helen 142 E. 22nd Street, N. Y. C.



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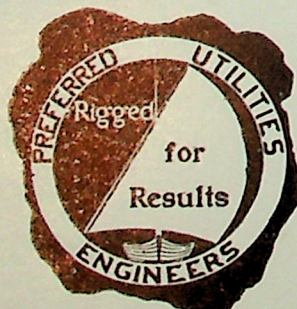
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